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Medical Times

A Monthly Journal of Medicine, Surgery, and the Collateral Sciences

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General Scientific

THREE TYPES OF RENAL SURGICAL DISEASE.*

Henry H. Morton, M.D.,

CLINICAL PROFESSOR OF GENITO-URINARY DISEASES IN THE LONG ISLAND COLLEGE HOSPITAL; GENITO-URINARY SURGEON TO LONG ISLAND COLLEGE AND KINGS COUNTY HOSPITALS AND THE POLHEMUS MEMORIAL CLINIC, ETC.

Brooklyn.

Cases representing three different types of surgical diseases of the kidney are presented herewith. The chief interest in these cases is in the diagnosis, for upon the diagnosis depends the correct surgical treatment for the condition.

The first patient is an Italian, 26 years of age. Six months ago he began to complain of pain in his lumbar region, which felt as though somebody was pinching him, as he describes it. This pain lasted for about a half an hour and then disappeared. The pain has been increasing in severity and duration, so that at present it is almost constant, manifesting itself as a dull feeling of soreness. About two or three times a day it becomes sharp and sickening, beginning in the left side, just above the iliac crest, and radiating around to the spine. It causes him to hold his breath and double himself up like a jack-knife, with a tendency to lean toward the affected side. He gives no history of hematuria, but his urine is cloudy, with a moderate number of pus cells and a few uric acid crystals.

This history is very typical of stone in the kidney, and on striking him in the angle below the twelfth rib with the open hand distinct tenderness is elicited.

Cystoscopic examination showed the bladder to be normal, and both ureters were easily catheterized. The urine from the right kidney was clear, 13 grains of urea, and the phthalein came through in six minutes. On the left side, which is the one suspected, pus, blood and crystals were found in the specimen withdrawn. The urea was 13½ grains, and the phthalein came through in twelve minutes.

From these findings, it is evident that the secretion of the kidney has not been interfered with and that it is functionating actively.

From the fact that the secreting capacity of the kidney has not been disturbed, I should say that the stone was lying free in the pelvis of the kidney and the parenchyma was not involved.

On examining the radiogram we find that to be the case: there is one large stone, the shape of an arrowhead, and a smaller stone below it, lying in the kidney region. In order to confirm my suspicion of the stone being in the pelvis of the kidney, we took a pyelogram. The pelvis of the normal kidney held 5 c.c. of fluid, but on the diseased side we injected 28 c.c. of fluid. You will note in the pyelogram an enlargement of the kidney, with flattening of the calices, and in the lower part of the pelvis lie the two stones seen in the former radiogram. This makes clear to us the necessary surgical procedure to be pursued in this case. Instead of doing a nephrotomy and cutting through a good deal of sound kidney tissue, we can open the pelvis of the kidney and by doing a pyelotomy remove the stones without destroying any kidney tissue.

Operation: The usual incision is made over the left flank, at the angle of the twelfth rib. The kidney is exposed and brought out on the flank and the stone is easily felt lying at the junction of the ureter with the pelvis of the kidney. A small incision is made through the ureter and pelvis of the kidney and a large stone the shape of an arrowhead is lifted out with forceps. The pelvis of the kidney is then inspected for the second stone, but it is not in evidence. By palpating, however, between the finger and thumb the stone is distinctly felt and on closer inspection it is seen lying within one of the posterior calices. The small opening is enlarged with a scalpel and the second stone removed. The wound in the pelvis of the kidney is then closed with interruptured sutures, the kidney dropped back in place and the wound sutured.

This shows the advantage of a careful study of our cases beforehand. From our examination we decided that the right kidney was healthy and normal; that two stones were lying in the pelvis of the left kidney, and that the kidney was not diseased. Had we not had a radiogram, it would have been natural to conclude that the large arrowhead stone

*Clinic in Urological Surgery, Long Island College Hospital.

was the only one in the kidney and we would have missed the other stone, but with a distinct shadow of the second stone in the radiogram we know it was there, and it was only necessary to do a little more surgery to locate and remove it. Our previous examinations also showed, from the location of the stones, that they could be removed by the simple operation of pyelotomy, and that to take out the kidney or to do an extensive cutting through the posterior convex surface would be bad surgery.

Let me impress upon you in all these cases of surgical disease of the kidney to employ all the diagnostic aids and to obtain all possible information about the kidney and its function before proceeding to any operation. When you have exhausted the diagnostic means you are in position to know the right thing to do for the patient.[1]

The next case is also one in which we have made a diagnosis of renal calculus.

This is a young man, 21 years of age, who began to complain about a year ago of intermittent attacks of pain coming on every month. The pain does not radiate, but is confined to the left kidney region. He has had three slight attacks of hematuria, each one lasting a few days. There has been no frequency of urination, either by day or night, but for the past five years he has had occasional attacks of enuresis.

Palpation shows a sense of resistance on the left side, with tenderness on striking him with the open hand. Cystoscopy shows the bladder to be normal, both ureters are easily catheterized, but no urine is obtained from the left kidney. The right kidney urine is clear, with a few pus cells, a few red blood cells and nine grains of urea. The phthalein came through in eight minutes.

The radiogram shows an enormous shadow filling up the entire kidney region. The shadow was so large that when I first saw it I supposed that the radiogram had been made upon the patient but was assured by Dr. Hood that such was not the case.

From our findings in this case I should say we have a normal kidney on the right side and that the left kidney is filled by an enormous calculus which has caused complete destruction of the secreting portion of the kidney.

We will now cut down upon the kidney and ascertain if my suspicions are correct.

Operation: The kidney is exposed in the usual manner. On lifting the kidney out on the flank we find a thin layer of kidney tissue enclosing an enormous calculus.

In this particular case, as the kidney substance has been entirely destroyed, it is quite useless to permit the kidney to remain, and it will therefore be much better for the patient if we remove the stone and the kidney together and do a complete nephrectomy. We tie off the ureter, divide it, and then ligate the vein and artery, and, in order to prevent it from slipping away after the kidney is removed, we hold it with a clamp. The kidney is then cut off, the clamp is loosened, the stump inspected for bleeding, and as the ligatures are holding tight, the stump is dropped back. A Miculicz tampon is placed in the wound and the wound sutured.[2]

The next case is a woman, 50 years of age. She came into the hospital complaining of a painless, constant hematuria which came on suddenly three weeks ago and has lasted since. The bleeding is free and she is beginning to show evidences of loss of blood. Her hemoglobin is reduced and her mucous membranes and skin are beginning to look anemic.

Our first thought in this case is: Does the blood come from the kidney or from the bladder? In order to locate the source of the bleeding it is necessary to proceed in a careful, systematic way, making use of all the diagnostic aids which I have described in the former cases.

Examination of the urine shows a small quantity of pus, a large quantity of albumin, a large number of red blood cells and no casts.

The Wasserman is negative.

Physical examination is negative.

Palpation over the kidneys shows no enlargement and only slight tenderness is elicited on the left side when the patient is struck with the open hand.

The cystoscope shows the bladder to be normal, and both ureters are easily catheterized. The urine drawn from the right kidney is clear—no pus, no blood, and eight grains of urea.

From the left side blood is seen issuing from the ureter before the catheter is introduced, and the catheterized specimen is heavily loaded with blood, There is no pus and the urea is ten grains. The phthalein appeared in five minutes from each ureter.

A radiogram of the left kidney shows no shadow of a stone and no enlargement of the kidney.

A pyelogram shows a normal pelvis of the kidney, both as to size and conformation.

On putting all our findings together we are still unable to make a positive diagnosis in this case. We can draw the conclusion, however, that there is no suppuration either in the kidney or its pelvis, that the kidney is not enlarged, and that there is no hard stone, either in the parenchyma or in the pelvis of the kidney.

We can exclude, then, pyelonephritis, pyelitis, calculus and tuberculosis, but this does not answer the question as to why the kidney bleeds.

Now, I have three possibilities in mind to account for the bleeding:

The first is—occasionally a concretion is composed purely of urates or cystin the consistency of which is so soft that it does not show in the radiographic plate. Ordinarily the nucleus of a stone becomes covered with phosphates which throw a distinct shadow in the radiograph. The soft stones which show no shadow are extremely rare. The rœntgenologists tell us that they do exist, but, personally, I have never seen one.

The second possibility is that there is a beginning hypernephroma in the substance of the kidney which is so small that it has not yet caused the kidney to become enlarged so that it would show in the x-ray plate or be felt on palpation.

The third possibility is a diagnosis which can only be made as a last resort, and that is the so-called essential hematuria of renal origin.

From the fact that the woman has been bleeding for three weeks constantly and is losing a considerable amount of blood, I consider it to her advantage to do an exploratory nephrotomy in order to ascertain by actual touch and sight what our laboratory aids have failed to reveal.

The diagnosis of essential hematuria is one which can only be made after all methods have been employed and have failed to determine the real condition, for nine hundred and ninety-nine cases of hema-

[1] The wound healed promptly and the patient made a smooth recovery.
[2] The calculus on removal was found to weigh one-half pound. This patient made a smooth recovery and left the hospital in three weeks.

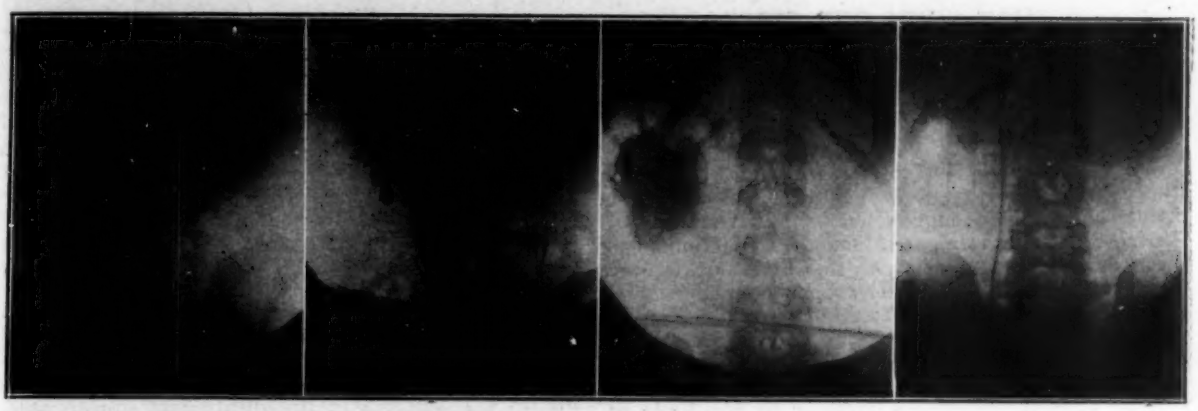

Fig. 1
Radiogram. Renal calculi, case 1.

Fig. 2
Pyelogram. Renal calculi, case 1.

Fig. 3
Radiogram. Renal calculus, case 2.

Fig. 4
Pyelogram. Essential renal hermaturia. Kidney and pelvis normal.

turia out of a thousand have some distinct pathological basis to account for the bleeding.

Operation: The kidney is exposed in the usual manner and brought out on the flank. The capsule is not adherent, it is not enlarged, there is no tumor present, and on palpating the kidney I find no sense of resistance, and there is no stone there. I next open the kidney along the posterior convex surface a quarter of an inch from the median line, following Brödel's line in order to avoid the blood-vessels. This permits of free access to the pelvis of the kidney, as it is being held apart with retractors. I make a careful inspection of the pelvis and find absolutely nothing abnormal in its appearance. A finger introduced into the pelvis explores all the calices and there is nothing abnormal on palpation. I must, therefore, conclude that I am dealing with a case of essential renal hematuria. I now introduce mattress sutures through the substance of the kidney and a running suture through the posterior border of the kidney which stops the bleeding. The clamp is removed from the pedicle and the kidney dropped back into its place and the wound sutured.

Our exploratory nephrotomy, then, has given us a positive diagnosis of essential renal hematuria by excluding any other condition which would cause the bleeding.

This condition has been well described by Thompson-Walker, Fenwick and Paul Pilcher. They describe it as hematuria which has been localized to one kidney and nephrotomy with, in some cases, an examination of the kidney after removal, has failed to reveal the cause of the hemorrhage. More careful examination of these cases, however, shows that in most of them a localized chronic nephritis exists, and in a few cases there is a varicose condition of one or more of the renal papillæ. The localized nephritis present in these cases gives rise to no changes visible to the naked eye, so when the kidney is opened and examined by a nephrotomy, no cause for the bleeding can be found.

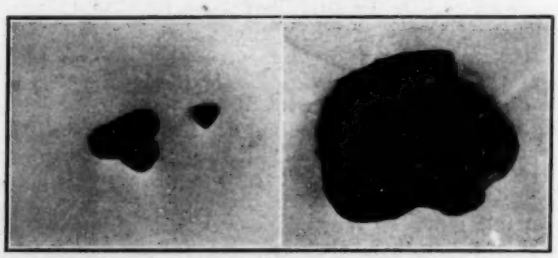

Fig. 1 Fig. 2
Fig. 1. Renal calculi removed by pyelotomy from case 1.
Fig. 2. Renal calculus from case 2. Weight ½ lb. Nephrectomy.

Furthermore, it is not found in every microscopical section of the kidney substance, so that a number of sections must be examined in order to find the change. In a section of the renal cortex the tubules and glomeruli are normal in appearance, except at the part where there is a patch of fibrous tissue separating the renal tubules. Frequently, the fibrous tissue forms a streak radiating toward the capsule, and sometimes it is subcapsular. The capsule is often thickened and there may be a patch of thickening at the spot where the intertubular streak of fibrous tissue reaches the surface of the kidney. The walls of the vessels are not changed, but occasionally the veins are dilated. The epithelium of the kidney is enlarged. In some of the cases operated upon a varicose condition of or more of the renal papillæ has been described. The origin of this varicose condition appears to be doubtful, but it may result from a patch of interstitial nephritis, as described above.

Roy, Harmonic and Israel have described some cases in which the symptoms of chronic Bright's disease developed several years after a spontaneous symptomless hematuria.

You may ask: Having done an exploratory nephrotomy, will the hematuria continue?

By our exploratory nephrotomy we have accomplished two things—first, we have made the diagnosis and excluded stone, hypernephroma, etc., and, secondly, the operation of splitting the kidney and sewing it up is in itself curative, for in all the cases recorded the hemorrhage ceased after the wounds healed.

The cessation of the hemorrhage has no doubt been brought about by the temporary pressure of the ligatures on the vessels and after the ligatures have been absorbed by the partial cutting off of the circulation from the contraction of the scar tissue caused by healing of the wound, so that our exploratory nephrotomy not only serves the purpose of establishing the diagnosis, but it will have the effect of a curative operation by stopping the bleeding.

32 Schermerhorn Street.

A CHAT WITH OUR GIRLS.*

IRVING D. STEINHARDT, M.D.,
LECTURER ON SEX HYGIENE TO THE JEWISH WELFARE BOARD OF THE ARMY AND NAVY; AUTHOR OF "TEN SEX TALKS TO GIRLS" AND "TEN SEX TALKS TO BOYS," ETC.
New York.

Very fortunately for the growing girl of today, the popular idea that it is immodest, or worse, for her to have a knowledge of her body, particularly of her so-called "private parts" and their functions, has been dispelled. Hereafter, in this little booklet, we shall call these parts by their proper name of "sexual parts." Nowadays, the best thought of educators is being put to the task of deciding upon the best way of giving her this knowledge in a proper and non-harmful way. Thus she may be enabled to take the proper care of herself and, later on in life, be in fit condition to perform her duties as wife and mother; not only to be healthy herself, but, because of this condition, to give to the world happy, healthy children. Also, with this knowledge placed before her, she may successfully withstand the many temptations to do wrong, which will present themselves to her at various times. Happiness in the future awaits those who will profit by what is offered. To those who will not, I can only say that they must be prepared for the most keen mental and physical suffering. "Mother Nature" is most severe with those who transgress her laws of health and decency.

This little pamphlet is presented that you may read it most carefully and gain by the knowledge it aims to convey, which, though rather in a condensed form, is to help you to grow from healthy little girlhood into healthy big girls and women. It is to teach you and assist you to take the proper care of yourselves at the various times of your lives when a special care is very necessary; also, to inform you in a modest, yet none the less, clean manner, about those particular parts of your bodies which have always been more or less a source of curiosity to you, namely, the sexual parts, including the breasts.

Your curiosity regarding these sexual parts has been a most natural one, and while other questions about your bodies have been most freely and openly answered, those which you may have been frank enough to ask at home concerning these "sexual parts" have been deliberately and painstakingly unheard, or evaded. This was neither a sensible nor a good policy on the part of those at home, for, not only did it arouse your curiosity, but made you yet more determined to find out all that you could. It also helped to destroy the close companionship and confidence that should exist between mother and daughter, and what more proper place and to what better person could a girl apply for such enlightenment than in the home and to her mother?

Unfortunately, what could not be found out easily or at all at home, could be answered in a more or less vulgar, indecent way among your outside acquaintances who did not need any persuasion at all to initiate you into the full knowledge of all they knew, both in words and by actions. Street knowledge of this kind, particularly, is usually not very good and most times even incorrect. My effort is to give you not only a truthful knowledge but some good advice. I trust you will be able to understand the former and be willing to be guided by the latter. I have your good in view, and I aim to properly prepare you for your mission in life, the highest achievement that woman can attain—that of wife to the man, and mother to his and her children. It was for this high and holy mission that you were put into the world, and when you will have fulfilled it in its truest sense you will most certainly not have lived in vain. Your husbands and the community in which you may live will owe you a debt of gratitude that can hardly be repaid.

Every girl must pass successfully through the stages of babyhood, little girl, big girl, young lady, and, at last, blossom into full bloom of womanhood with, I hope, the happiness and enjoyment of wifehood and motherhood. You note I seem to be trying to get before you the future fact of probable wifehood and motherhood, and although my readers may be very young, I still believe I am right in doing so, for it is my belief that as soon as one can think and reason, her main mission in life should be pointed out to her in a proper way, so that all her education may be with this object in view. Then, when it is attained, she may be properly fitted to fill her station in life.

Also note that I combine wifehood and motherhood, for neither can be complete, in the whole meaning of the word, without the other, in the plan of the universe. Under normal conditions, one was not meant to exist without the other, for children exist by reason of the mating of man and woman and, therefore, this mating has the creation of children for its main purpose. Certain diseases of a very preventable kind can rob a wife of the invaluable right of being a mother. These we will talk about later, in this little pamphlet.

Girls should bear this fact in mind, that the best of health is their right and heritage, and, within certain reasonable limits, you are sure to possess it if you will but live a proper, happy, right life as explained to you at the different times by your teachers, whether living ones or books on the subject. Again I say to you to lead a proper life so far as your sexual organs are concerned.

Those parts of your body known as your sexual parts are the ones that have to do with the continuation of the human race, a fact which some of you already know, and which all of you should and must know in order to understand why such instruction as is here offered you is both necessary and important. It is the desire of all of us who have the best interests of the human race at heart that, not only the present growing generation, but the generations to come, should be an improvement upon the last. If we are to have healthier and better future generations, we must see to it that you, the future wives and therefore the future mothers of these coming generations, are healthy, both mentally and physically, and happy and contented, also.

It is an inborn desire for every girl to want to be a mother, as is shown, not only by her early happiness when playing with dolls, but also by the highly complimented feeling that comes when her own mother, or the mother of the baby "next door," permits her to take care of the little one of the family. You all remember this, and how important you felt when so trusted; how you loved to "fuss" over and "mother" the real, live doll, or, when this was not forthcoming, over your imitation babies. This is the inborn maternal instinct of which you

*In the December, 1919, issue will be found the companion article, "A Chat With Boys."

should all be very proud, and should constantly seek to foster, so that, as you grow older, it will become stronger and stronger within you, causing you to look with disdain and disgust upon those of your sex who would try, after marriage, to escape the great joy and pleasure of motherhood.

Ever since you have been little girls you have been told or should have been told, to be careful to appear in the presence of others with your sexual parts properly covered, not only from your own sex, but particularly from the gaze of the male sex. Likewise you should have, and probably have also been told that that part of the body known as the breast should likewise be concealed from public view. The reason for this has been, to a certain extent, the fact that the display of these parts in the presence of others of your own sex has awakened in them the tendency to handle them; or, to bring about a conversation which is usually rather indelicate and indecent and, therefore, not calculated to improve the mind. The extent of the indecency of this conversation depends somewhat upon the ages of the girls taking part in it, and their usually wrongly acquired, incorrect, street knowledge of things sexual. Immodest display, intentional or unintentional, it matters not which, puts thoughts and desires into their minds, which are degrading and which cause both of you to be confronted by a temptation which, when matters have gone so far, is usually yielded to, and which can only bring about moral ruin, disgrace and suffering to the girl. Also it either starts the man, or helps him still further along, on an immoral career at best, debasing and degrading, but which is also to bring ruin to the health of not only himself, but to that of the woman whom he marries, and to those for whose birth he will be in part responsible, later on in his life.

You see, therefore, the consequences of immodesty can be very far reaching and ruinous in its results, going on to actual immorality. It is for that reason that those of us who are constantly working to safeguard our girls from dishonor and disaster, and to also safeguard the public health, decry the present tendency in female dress. For, at present, what the average girl wears must certainly be called an immodest way of dressing if one would be only most mild in his criticism. It seems almost as if each female tried to see just how far she can go in the matter of wearing less clothes than her neighbor and yet keep within the law, also likewise, how transparent and translucent the little material used without being arrested for indecent exposure—and why some are not, is a great puzzle to the writer, for they are certainly violating this law.

Perhaps it might appear strange to you, when I say that even little girls should keep themselves covered, so far as these parts are concerned. The reason, I will explain to you in as few words as possible, lack of space preventing a detailed explanation. A very bad and harmful habit of touching or "handling" themselves in and about these most sacred parts, is prevalent among even little girls, and still more so among bigger girls, because, either by accident or through knowledge obtained from another, the girl so doing has discovered that she can bring about within herself a certain feeling that seems pleasant and enjoyable to her, ignorant of the fact that she is most likely injuring herself in these very delicate and important parts in a most serious manner. This is a habit of which some of you may have heard and which some of you are already guilty of practising. It is called masturbation or self abuse, and, as you see, it is an attempt to obtain a certain sexual satisfaction which is supposed to be only attained or enjoyed after a legal marriage based on the highest feelings of human love. To those of you who may have already contracted this low practise I say you had better stop before you are sorry; to those of you who are still in ignorance of it, I say remain ignorant.

You would suppose that a girl practising such a repulsive habit would, in every case, do it secretly, but, strange as it will seem to you, in the female sex at least, this is not always true. Therefore, how still more repulsive is this unnatural thing when you find one girl doing it to another, and, most unfortunately, this mutual masturbation is not at all uncommon. It leads to still more degrading and health harming habits, all of which anyone with brains could readily see is most harmful and debasing in every possible way, to every girl concerned in it.

Without going into a great deal of detail as to the construction of these parts of a woman, whether still immature or full grown, I would inform you that, because of the great importance of the special work that these organs have to do, perhaps the most important of all the functions of the body, they not only must be well nourished to keep healthy, but they must be able to record and be susceptible to the silghtest sensation. To provide this necessary tone, the sexual organs are very well supplied with blood vessels and nerves, the former to bring the necessary nourishment to them, and the latter, to carry out the second requisite mentioned. The greatest harm done in masturbation is mostly through excess indulgence in the act with the resultant over-stimulation of these parts, in the course of this abnormal practise, becoming as it does, not only a tax upon the nervous energy of the body, but also causing an over-supply of blood to come to these particular parts in response to the stimulation which, in turn, causes an inflammation of these delicate organs. You all know that an inflammation of any part of the body is not a normal condition, therefore you should readily understand how much more harmful it must be when it attacks these most delicate and important organs of the body. The result of such an inflammation is one of the main reasons why so many girls have a whitish or other colored discharge, coming seemingly from the entrance to these sexual parts, a discharge which one may say right now is never harmless, and always curable, but best of all preventable in the beginning, if you will but have it so.

Outside of the necessary daily washing, and this is most necessary, these parts should never be handled by anyone including the possessor of them, except that always after urination (i. e., passing water from the bladder), a girl should carefully dry herself if she would avoid the unpleasant odor resulting from permitting urine to remain thereabouts, something which is bound to happen to some degree owing to the construction of these parts, unless she does as just stated above. It seems absurd to tell a girl, large or small, that, not only should she not permit any of her sex to touch her in and about those parts, but to discourage any familiarity. Still, strange as it may seem for some of you, such a warning is positively necessary. In addition to this warning regarding her own sex, one must decidedly

state in addition that never should she permit the opposite sex any familiarity whatsoever, and this injunction regarding the male sex does not necessarily mean only the sexual parts, but includes her whole person in general and also the language used to her.

It is with regret that one is forced to acknowledge by reason of practically every day observation and report that girls do permit such familiarities, in some cases only by members of their own sex, but in only too many other cases, the male sex is also permitted these liberties, and I am speaking now of girls who consider themselves respectable and clean and not of immoral women in the usual sense of the word. The girl who will permit such actions is in the very great danger of allowing herself to be persuaded to permit even greater familiarity, which, of course, spells moral ruin and dishonor for her. When she stoops to the greatest act of immorality—that of permitting herself to indulge in the sexual relation without the bond of marriage—, besides surrendering to the man who ruins her, the greatest treasure a woman has—her moral honor—, she puts herself into the danger of contracting two of the vilest and most incurable diseases that the human race can have visited upon them, and which we designate as gonorrhea and syphylis. For, the boy or man who would be unduly familiar with her, has probably committed the same familiarities with other women, and more than likely is a carrier of one or both of these health-wrecking, mind-destroying diseases.

The girl who also exposes herself to this immoral and degrading familiarity, must remember that also one of the resulting possibilities of her act, might be to find herself in the condition which is commonly known as being "in a family way," but which we call "being pregnant," as a more refined way of designating this condition of expectant motherhood. You hardly need to be told of the disgrace and dishonor which is the lot of the girl who is so unfortunate as to become a mother without the sacred portals of the marriage state, nor is it very pleasant for the innocent child, when it grows up, to realize the conditions under which he was born. So you see there are many unpleasant possibilities in store for the girl who cheapens her womanhood and forgets to exact the honor and respect due every real true woman, from the male sex.

As I told you in the beginning of this little booklet, God created you to be Man's mate and mother of his children, and did not intend that you should permit your sexual organs and the secual function to become a thing of barter, or a play-toy for men.

The first signs that the little girl usually has that she is passing from the stage of little girlhood to the stage of young womanhood, is that her breasts start to grow larger and therefore more noticeable, and also that hair begins to appear in various parts of the body, but particularly in and about the vicinity of the sexual parts. If a girl is possessed of a wise mother, she has already received some slight sexual lessons even before this time, but if she has not, this is a very good time to begin. Where the mother, through ignorance or for other reasons, is incapable of doing this duty toward her daughter, she puts into her hands some good book on the subject. Many mothers have chosen for this purpose a book known as, "Ten Sex Talks to Girls," published by J. B. Lippincott Co., of Philadelphia, Pa., which in a simple and clear manner, tells a girl just about all she needs to know.

Shortly after these changes in a girl's system, she awakes one day to the fact that she is losing blood through the entrance to the sexual organs. If she has been properly instructed, this neither surprises nor frightens her. She knows it is a monthly function which usually starts some time between the ages of twelve and fourteen years, and which will continue for many years. For the benefit of those who do not know, I will state that the name of this function is the menstrual period, and during the week it usually lasts, there are certain precautions that a girl must exercise, but, contrary to popular belief, it does not mean that a girl must be unclean, for certainly after the first day, she can, without injury to herself, take a warm sitz bath; and, surely after the third and fourth days, her regular daily bath, taking the precaution that the water be neither too hot nor too cold, and that she does not remain in the bath for too long a time. This will be strange, but welcome news to most of you, for it will mean that by keeping yourselves clean, you will not give off the unpleasant odor which is sometimes present during this function, thereby advertising to those with whom you come in contact, what is ocurring.

So far as your station in life will permit, just before and during this period, you should be as inactive as is possible, particularly so far as physical exertion is concerned. If you are also fortuante enough to be able to relax mentally, you will be benefiting your health by doing so. Dancing, running, jumping, rowing, excessive walking, tennis and other exertion of this order, is not to be indulged in. The sewing-machine, likewise, should not be used where it can be avoided, nor should anything be spoken of or indugled in which tends in any way to affect the sexual organs. Likewise, during this time, only food of a plain sort should be eaten, and everything sour or highly seasoned be carefully avoided.

Where there is pain accompanying this function, it can be cured unless you are so foolish as to permit a false modesty to keep you from speaking of the trouble to your monther, or from consulting a doctor. Go to a good doctor for this or any other ailment and not some "quack." Never endeavor to cure yourself by taking some advertised patent remedy. Let me state for your information, that any and all things that you may tell the doctor whom you consult, or anything he may find out in the course of his examination, must, according to the law, remain a secret between you and him. I might again recall to those of you who suffer from a discharge of some kind,which seems to come from the entrance to your sexual parts, that this discharge is curable and should not be permitted to continue. It is not a harmless matter, as you may think, but may be the symptom or sign of some serious trouble within.

In closing this little talk to you, I again want to appeal to your good sense to think well over the reward which comes to the girl who leads a moral life, and on the reverse of the picture, the trials, troubles and tribulations that await the girl who would transgress the moral laws of Mother Nature and Man. The public prostitute, the usual name given to the woman who makes a living by offering her sexual organs to men, is no worse, from a moral standpoint, and commits no greater sin than the girl who does this thing in secret, posing as a clean girl until she is found out. The only life for any girl to live, who desires health and happiness, and who would be contentend with her lot, is found in the

path of righteousness, for that leads to the real best of all there is in life. The path of immorality can, in the end, but lead to disgrace and wreck of mind and body, a pitiful end, and a probable grave in a pauper burial ground. Ponder the facts presented to you, most briefly, and, please God, may you choose the path of right living.

No. 252 West 78th Street.

THE AMERICAN PHYSICIAN IN THE DRAFT AND IN THE SERVICE OF THE WORLD WAR.

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Perhaps the best outline for this paper will be a discussion of army and navy medical organizations before the war, a presentation of their development during the war and their service with their accomplishments and last deductions in a suggestive way for the medical share in the new plan of universal military training. The writer is among those who believe and hope that such a form of universal military training will be adopted as will forever discourage any and all future attempts at world conquest.

Of our three broad subjects the first is the antebellum army and navy organization. One is amazed at the meagre personnel efficient in former peace times, exemplified by the following records. Commissions were held by only 447 in the Regular Army with nearly 1600 in the Medical Officers' Reserve Corps, and by 329 in the Navy with 25 contract surgeons and with 161 in the Medical Officers' Reserve Corps. The totals of 2047 for the army and 551 for the navy give a combined service total of only 2562, more or less. These figures approximate 2 per cent. of the entire profession in the United States, or even less. Independently of the draft, about 20,000 volunteered very early in the war, manifolding this percentage by 8 and making 16 per cent. or more early in the united services. Further augmentation followed so that when the armistice was declared there were about 35,000 physicians in the army and 3,000 in the navy, multiplying the original 2 per cent. by thirteen and reaching 26 per cent. of the medical profession.

These large figures involve only the uniformed medical officers and have no recognition of the many thousand physicians who as legal and volunteer members of Local Boards, District Boards, Medical Advisory Boards and perhaps the United States Public Health Service.

The factors in this wonderful patriotism was the authority in the Surgeons General of the army, navy and United States public health service; the executive qualites of the Council of National Defense, Medical Section, and its own state branches, and finally the close correlation of the county and state societies of the American Medical Association with its great organ of notice information and instruction *The Journal*. These societies have for years shown their efficiency in matters scientific, sociologic, economic and, in restricted sense, public. Hence the expected thing occurred: Organized response to the nation's call for personal, professional and communal service and sacrifice. No one may or will or does question the losses sustained by individuals in absence from home and practice. The devastations of the influenza epidemic were accentuated by decreased medical service in all communities. The whole balance of the draft was to leave the needs of the country in all vocations protected as far as possible. If a draft of the physicians as such had also occurred, the same wisdom would have been exercised. In fact as later outlined in this paper, it was exercised, especially with regard to medical students and young physicians of draft age.

The most pithy summary of the results of medical effort in the world war was given by the Secretary of War on September 3, 1919, in Philadelphia before the American Chemical Society, in these words: "* * * * The soberest, sanest, least criminal aggregation of its size that ever stood together on this planet." This was his tribute to the American Expeditionary Force. He added: * * * * The doctors, as a class, made a great contribution to the success of the war. This is the first war in history in which deaths from disease were less than deaths from battle wounds.

"In the Spanish and Russo-Japanese Wars the disease and death rate were made equal. In this war we have changed that. This was due to the fact that in the medical profession, as in the chemical profession, the leaders of their profession forgot their former activities to put on the uniform and serve the nation * * *."

The second general topic is the development of medical organization and service during the war. There are two phases of this development: the medicolegal in the draft boards and the professional in the training the fighting forces for prevention, alleviation and treatment of disease and wounds.

It should be remembered that as the commonwealth of our country regard the Selective Draft Law and its enforcement as a distinctly civilian rather than military proceeding, so should our profession regard the work of its members on draft boards as civilian rather than military. For this reason, however, no distinction should be made at the cost of those physicians who held no commission but yet contributed definitely and potently to the creation of the army and the success of the war. In a brief review of the medical work on local boards by the physicians at home note must be kept that doctors held no commissions but only appointments by the President. It will be remembered that nearly every local board had at least one doctor so officially appointed for its personnel, and that he later surrounded himself with several or many volunteers. In some boards of this city these volunteer helpers numbered a dozen or more, subdivided themselves into committees for alternation and reciprocation of service and did work astonishing in amount, detail, efficiency, value and results.

All District Boards had a quota of physicians and were by the law required to have at least one.

Later came the Medical Advisory Boards, in large measure founded on the original advisory board for venereal diseases at St. Mark's Hospital organized by the writer during the first draft from July to December, 1917. When the personnel of all these medical members is contemplated, it is realized that practically all the leaders of the profession not under commission were in the selective service. Conservatively speaking this is a remarkable record.

Statement of difficulties in the work, if not adverse criticism, is in order, and it is hoped that in the discussion the former members of the Selective Service Headquarters Staff will be heard in agreement or disagreement with what is said.

The spirit of the original Local Board was to have one medical, one labor and one legal member. A few boards had all physicians and a few all civilians or lawyers who under the law engaged physicians in an advisory capac-

*Abstract of a paper read before the Society of Medical Jurisprudence, New York.

ity as provided in Sections 38, 42 and 96. The author's opinion is that it was a mistake to permit any board to operate without one medical vote and doubtless some of the difficulties encountered in boards otherwise organized arose from the absence of that vote.

The author is one of those who hopes to see the day when medical questions of importance in our courts of law cannot be decided by votes of lay juries.

In New York City the objective was reached of having all volunteer physicians whether nominated or even appointed by Local Boards themselves to be recorded and approved by the Selective Service Headquarters of the State in Albany. The author may truthfully state that he was one of the instruments in bringing about this objective. By examination of the medical society and medical institutional affiliations of the nominees the highest possible grade of ethics in the personnel and of efficiency in the work were maintained. It is believed that the results fully rewarded the detail and the labor.

Physicians of draft age almost universally sought and received commissions before being drafted, acting as volunteers or prior to summons before the local board. The strength of the profession of the future was protected by the admission of medical students to the Medical Officers' Reserve Corps by commissions as soon as they were drafted in accordance with Section 151b, Selective Service Regulations. These steps were all wise and successful, yet now come three which were otherwise, namely, the Group C or Limited and Special Military Service physicians, the original organization of the Medical Advisory Boards and the variations among standards of medical examination, resident and too long persistent in the orders themselves and in the great differences between board and camp examinations.

Taking each of these three matters in turn the facts are as follows:

The physicians drafted for limited or special military duty really pestered the Selective Service Headquarters with inquiries about their status as to readiness to enter service in terms of closing offices and homes and severing relations with institutions. They considered themselves in a serious chance predicament, yet could learn or do nothing.

So much difficulty had existed between the headquarters and the boards on one side and the camp surgeons on the other side as to the result of examinations that the thought occurred to the writer for their induction on the following plan. If these Group C physicians could be inducted into service and trained to become permanent examining bodies in the camps under guidance and control of superior officers, then the Local and District Boards and the Selective Service Headquarters of all states would no longer be dealing with a fluctuating personnel in camps who totally changed as fast as units left for Europe. With approval by the chief of the New York office, Hon. Martin Conboy, the plan was presented and approved in the Selective Service Headquarters in Albany and then transferred to Washington. Orders of induction followed. The result was unique. The men at least in many camps seemed to have been regarded as professional defectives rather than as physical defectives, among licensed and skillful physicians. They were drilled by subaltern lay officers and then given menial non-medical duties. One in my knowledge cooked for two hundred men for several months, and another carried urinals as a hospital orderly. Yet both these men were successful in private practice. The point is few, if any, ever reached the base hospital staff of any camp or the examining staff of any camp according to the plan stated. Someone blundered in the interpretation of the plan and in the order for it. Instead of a gain in professional efficiency it was a needless and pathetic loss of medical time and skill to the government. What is equally important is that all the old difficulty continued as to co-ordinating examination standards between the boards and the camps.

The author believes that in a future draft (should war ever again curse this liberty loving and peace living nation) a wise provision will place the physicians of draft age not qualified by physical defect for full military service on duty as permanent parts of Base Hospital Staffs and Camp Examination Boards at home as distinguished from similar bodies at the front.

The second adverse circumstance for our notice was the original organization of the Medical Advisory Boards. The writer recalls an interview with the Provost Marshal General with which he was honored in Washington in December, 1917. Among other matters casually discussed was that of the forthcoming Medical Advisory Board as it was then planned. The writer mentioned his experience at his advisory board at St. Mark's Hospital to the effect that only cases of great difficulty be referred otherwise the local boards would overwhelm the advisory boards with needless mere detail work. The restrictions suggested were not laid down for the stated reason that the plan was being developed by a committee of prominent physicians (who certainly had more professional distinction than the writer but had not had his experience at the hands of the New York Local Boards). The outcome needs no description. The Medical Advisory Boards did not do the work because they could not. In a certain sense the brief period of this embarrassment was the dark period of the draft. In many ways darker than the days of July and August, 1917, when no one really knew his duty or how to perform it. This is true because the Local Boards felt themselves reflected on and the Advisory Boards imposed upon by the new order. A quasi deadlock seemed imminent between Local Boards who would not and Advisory Boards who could not do the work. The error was, however, very quickly corrected and the restrictions were placed on Local Boards so that only true consultation work was referred. Again someone had blundered. It is hoped that a future draft will absolutely guard the judicial consultation duty of this advisory work.

The third element of real loss was the changes in regulations and standards of medical examination. The first orders seem to have been a hasty abstract of the longer volume on recruiting medical standards in peace. The very abbreviations lead to confusion well exemplified by the author's own experience as to venereal disease mentioned in a recent paper.[2] Acting on the practice of the army up to 1916, it was determined to reject all active venereals. This was consistently done until late in December, 1917, when the writer learned in the office of the Surgeon General that they were to be accepted unless incapacitated or actively infectious. In matters so important there should have been a fixed ruling.

The second standard of physical examination was an improvement but contained many obscurities and not a few real errors and contradictions. The final form was a workable efficient pamphlet, but there again arose the divergencies between the physicians of Local Boards with long experience with the regulations, the Medical

[2]The Venereal Problems of the War, Med. Rec. July 12th and 19th, 1919.

Advisory Board physicians (often with greater professional standing but little or no knowledge or respect concerning regulations), and the camp surgeons, with almost disregard of the regulations, often through special orders of the Surgeon General, which never or very tardily, if ever, reached the boards. It is interesting to say that the greater the prominence of a Medical Advisory Board member, the more he disregarded the regulations in many instances and that the higher the rank of a camp surgeon, the more independent was he of the regulations as given to the boards. Hence, a vicious circle existed, very troublesome, indeed, to the Local Boards, District Boards and Selective Service Headquarters Staff.

The writer would offer the opinion emphatically that some method should have been adopted by which any order from the Surgeon General affecting the examination of registrants in camps should have been transmitted to the Provost Marshall General for his information and for publication as regulations for the Local Boards. If this had been consistently done, a vast amount of confusion would have been avoided and at least conformity of method established.

Doubtless in another war some such detail will be respected.

Perhaps such criticism from any citizen formally in the service are not becoming or proper, but these are made with great respect for all offices, officers and their various commands.

A celebrated example of what is meant were the radical changes in regulations concerning heart conditions, proceedings from the Surgeon General's office to camp surgeons in May or June, 1918. Up to this time local boards and camp surgeons had been accepting for observation various minor organic and functional cardiac defects in conformity with the experience of the British Army. This was to the effect that many of these cases, through training were reclaimed for first or second line duty or valued services at home, each in the percentage of about 20 per cent. leaving 40 per cent. as final rejections. At this time orders from the Provost Marshal General were issued to expedite all possible work so that the largest possible number of men would be trained ready for European duty, but nothing was said in these orders concerning the order from the Surgeon General to the effect that all such heart cases were to be rejected. The outcome of wholesale rejections in camps of these forms of cardiac disease accepted in good faith by Local Boards may be imagined. It is a pity that the Government was not protected against such losses in time, energy, efficiency and expense by such a plan as that just named. Doubtless in another war the record of this experience will be the means of avoiding such a blunder.

Until final reports are in hand from the Surgeons General of the Army, Navy and Public Health Service and from the Provost Marshal General and digested, temporary deductions as to the outcome of the draft are alone possible, but it is desirable to state that these are commendatory and creditable. About ten million men were called and registered, but only a third of these were examined. Of this third, 29.6 per cent. were disqualified and 70.4 per cent. accepted and then sent to camp for training. At the camps 8.1 per cent. were rejected and 91.9 per cent. finally inducted. A very instructive comparison of figures reveals these data: In the draft of 1917 rejections numbered 29.1 per cent.; in 1918, 29.6 per cent.; in the Civil War first draft, 31,69 per cent.; second draft.; 24.06 per cent.; third draft, 24.95 per cent. and in the fourth draft, 13.42 per cent., making the average 25.74 per cent. Relaxed standards of examination marked all but the first Civil War draft. In this World War, urban rejections were 21.68 per cent. and rural rejections 16.89 per cent. —among 100,000 of each class considered. All these figures prove the consistent good work and good faith of the physicians in the midst of what seemed at first to be almost hopeless confusion, disorganization and unpreparedness. The outcome was a triumph of Anglo-Saxon individualism and of American genius of fearless enterprise and production.

Under the present topic of the development of medical organization during the war come as stated professional accomplishments among the training and fighting forces, in prevention, alleviation and treatment of disease and wounds. The clash and crash of arms are no longer the only victory of war. The conquest and triumph of preventive medicine have never been so signal, nor indeed so actual. The Secretary of War, as quoted, states that this World War is along in history with battle fatalities outnumbering disease mortalities.

The probable factors of these successes are two: actual scientific progress in determination of causes, transmission and prevention of disease and actual recognition of the authority of medical officers to determine matters within their own sphere with relation to the forces. Based on the experience of this war the prophecy is becoming and fitting that in the next war the official standing and authority of medical officers will be greater than in this one. Of course only good will result therefrom.

Limitation of space forbids lengthy quotations from the history of military medicine, but one may state that in this World War vanquished and vanished were the specters of devastated communities and decimated or destroyed armies by such familiar wartime diseases as typhoid, typhus and relapsing fever, scurvy, malaria, smallpox, tetanus, dysentery, menengitis and the like.

Sanitation and vaccination, came, saw and conquered typhoid fever even in the real epidemic in 1914 in Belgium. Compulsory vaccination permitted only six deaths of smallpox among more than two million American enlisted soldiers. This recalls the classic fact that in the Franco-Prussion war, the French, without compulsory vaccination, had far more deaths from smallpox than the Germans, with compulsory vaccination, had cases of this disease. Antivaccinationists, antivivisectionists, Christian Scientists and simliar other "cultists" take notice.

Each of the other diseases listed had a more or less epidemic start, intense struggle and total conquest by sanitation and preventive medicine. Typhus fever in Servia, Austria and Russia is a byeword. The work of the American Red Cross in Servia can never be suitably memorialized. The writer has heard the statement that there is hardly a family in that country that has not suffered, directly or indirectly in its close or remote relationships, or in its casual and intimate friendships. This is the measure of what typhus fever in Servia meant. Relapsing fever appeared in Russia, and cholera in Italy and Russia. Scurvy is almost unknown through suitably canned green vegetables and good food. In prison camps where food was withheld, it came but was soon relieved. It is no exaggeration to say that in the days of Sir Francis Drake, scurvy was the dread and the chief problem of the British Navy. Tetanus through antitetanic serum and prompt antiseptic measures is almost completely eradicated from wounds. The easy application of sanitation when knowledge is com-

plete is shown by the facts that trench fever is now prevented from its limitation of fighting efficiency by the destruction of body lice as the intermediary hosts or carriers. The bedbug and the body louse are known to carry and transfer both typhus fever and relapsing fever. Does it not seem foolish that the work of the Medical and Sanitary Corps should be limited by any authority outside its own heads. A very brief epitome shows that by preventive and protective innoculation dysentery; typhoid fever, cholera and smallpox were greatly controlled and that by destruction of vermin typhus fever, recurrent fever and trench fever were also checked. In all these and similar diseases, sanitation is of great importance as proved by its influence upon malaria and yellow fever through the destruction and exclusion of the mosquito and in other conditions by the exclusion and destruction of the common house fly.

Still open for progress and largely not controlled in this war were mumps, scarletina, measles, pneumonia and menengitis, but partial failure in this war does not foretell continued failure in civil or military conditions of the future. Typhoid fever fatalities were about one-tenth those of menengitis and about one two-hundredth those of pneumonia. No extended epidemic of any disease occurred, except the world-wide epidemic of influenza with pneumonia secondary to the influenza. If its peculiar and ravaging devastation is deducted, then the morbidity of the entire American Army sinks to the amazing total of 2.2 per thousand. This is hardly more than the sickness rate in times of peace.

When the authority of the Medical Staff is heeded by the General Staff of our army and all overcrowding in barracks avoided, then this step in sanitation will aid in decreasing the incidence of such respiratory diseases as those already mentioned: pneumonia, influenza, measles and menengitis.

The best concrete example of the influence of overcrowding known to the writer occurred in one of our largest hotels. The laundry for guests' property was taken from the subcellar to the roof and housed in a modern factory structure with extraordinary window space for sunlight and air on all four sides. The proprietor has reported to me that the subconscious efficiency and the general health of the workers have improved at least 50 per cent. I replied by saying that after a while the average business man would develop brains enough to realize that when a physician speaks, he usually speaks the truth to the effect that good work cannot be obtained from any animal in unsanitary conditions, no matter whether such animal is a human being with a soul, or a horse without a soul in a stable. We will hail the day when the efficiency engineer walks side by side with the sanitary engineer, the one laying out the factory building and its equipment for mere work, and the other laying it out for the basis of all work, namely, the health of the workers. Verily, civilization has still much progress ahead of it in these matters.

The last general topic is deductions or suggestions as to the medical share in universal military training. Medical education and medical standing in the army organization and the nation seem to be the subdivisions of this subject.

In the matter of education, it seems to the writer that every medical school in the country, along with its developments toward the highest possible grade of training must in the future include a brief course of lectures by a suitable army or navy medical officer on the broad principles of the organization and duties of the medical staff, and of the plan of medical stations and hospitals at the front. To this may well be added suggestions conforming the broad principles of examining, accepting or rejecting recruits. Army and navy sanitation should be duty emphasized. In my own day as a student not one of these topics was taught or even alluded to except perhaps some phases of military surgery. Even these were noted as parentheses and were not made plain declarative sentences of scientific duty for each student. The writer even doubts that this much would have been taught but for the fact that one of the professors had been one of the prominent surgeons in the Northern Army during the Civil War and therefore knew the importance of these topics. It is folly to expect to lead the profession blindfolded into such a sphere of work when moderate instruction will be so illuminating.

In the matter of medical standing in the army organization and the nation, the following facts seem proper. Whereas nearly all small and many large urban communities have either a health officer or health department as an integral part of the government, it is anomalous that no nation has a central health portfolio equal in rank and influence with other branches of the government.

In the United States the Public Health Service is subordinate to and only a department of the Department of the Treasury. It cannot have its own budget except within that of the Treasury Department. It cannot appear before Congress except through commission of the Secretary of the Treasury. Again it is a case of decision and judgment by a layman as to whether or not a medical problem is worth consideration and whether or not it shall be accepted or denied. Only the other day the writer asked one of his patients who is a member of the New York Chamber of Commerce why that body did not elect a few prominent physicians so that it could be kept in touch with the nature and importance of questions of public health. His frank admission was that the probable reason is, no one had ever presented this question. He further admitted its manifest importance.

In the navy rather recently the Medical Department has become a part of the General Staff, but in the army, the Surgeon General is not a member of the General Staff or even represented therein. During the war General Pershing, of his own initiative placed three medical officers on his General Staff. If the medical problems of the fighting forces are to be correctly solved, then they must be left in the hands of medical men commissioned in proper rank and vested with full authority.

The success with which the plant of General Pershing resulted will probably be the forerunner of the very recognition described. The present anamolous situation probably arose from the fact that sanitation and preventive medicine are only now greatly developed and still developing departments of medicine. In most of the former wars and even in those of recent date, except the Russo-Japanese and the Spanish American War, they were almost unknown. The accomplishments of these two wars were as little or nothing when compared with the results in this World War. Insistent but patient should be the demand, however, that henceforth a greater standing must be given in military forces to medical science. When its results are fully measured, then the present errors will be corrected. As a rule it takes a generation for such reforms to establish themselves. For instance, this generation accepts the bacterial origin of many diseases as axiomatic, but the last generation at first heard, then doubted, and finally accepted the facts.

There is nothing in this contribution in the slightest degree unappreciative, unpatriotic or unfair in its aim. It is impossible to close the paper with an appreciation of the Selective Service Law and the medical work in the war in words better than those of my former chief, the Provost Marshal General, which rather aptly apply to both: "By all administrative tokens, the accomplishment of their task was magic, but the magic lay solely in this:

At the President's call, all ranks of the nation reluctantly entering the war, nevertheless instantly responded to the first call of the nation with a vigorous and unselfish co-operation that submerged all individual interests in a single endeavor toward the consummation of the national task. I take it that no great national project was ever attempted with so complete a reliance on the co-operation of citizens for its execution. Certainly no such burdensome and sacrificial statute has ever before been executed without a great hierarchy of officials. This law has been administered by civilians whose official relation lies only in the necessary powers with which they are vested by the President's designation of them to perform the duties that are laid upon them. They have accomplished the task. They have made some mistakes. The system offers room for improvement. But the great thing they were called upon to do they have done. The vaunted efficiency of absolutism of which the German Empire stands as the avatah can offer nothing to compare with it. It remains the ultimate test and proof of the intrinsic political idea upon which American institutions of democracy and local self-government are based."

If this brief contribution stimulates the discussion of the points it has raised, the great labor and detail of its preparation will be only recompensed.

45 West Ninth Street.

ABSTRACT OF DISCUSSION.

Hon. Martin Conboy, who was director of the draft in New York City in 1918, said:

I will give you something from the viewpoint of the non-expert and layman,

First, I thought that in connection with the administration of the law the doctor was an intolerable nuisance. I can best explain what I mean by drawing a picture of what frequently happened. The local boards have been in some instances at great trouble and expenditure of time and money eventually to bring a man to the doctor for a physical examination. Sometimes it was a great deal of trouble to get the man. Then he sought deferred classification and was sent to the Legal Advisory Board which obtained statements of various facts in respect to his past history in order to enable them to determine in what classification he was to be placed. The Legal Advisory Board read reams and reams of material concerning this man who was seeking deferred classification and finally put him in Class 1. He then appeared at the District Board and asked deferred classification. Here all of this labor had to be repeated by the District Board, and they finally passed on his claim and he was eventually sent back to the local board approved for Class A and was then sent in for physical examination. Finally, after all this trouble the doctor found that this man was not fit for service in the army any how. Of course that was a necessary consequence of the situation and we had to go through it.

The difficulties we experienced in connection with the determination of a man's physical grouping were, as Dr. Pedersen has pointed out, to a large extent the result of changes in the regulations regarding physical standards. In the initial stages of the draft we did not have so much trouble of that character, because the first standards were taken almost entirely from the regulations in regard to physical examinations of the regular army, somewhat modified so as to be applicable to voluntary enlistments. There is a great deal of difference between voluntary enlistments and conscription. Among the volunteers they could pick and choose pretty much as they wished, but when it came to conscription and universal service for all those included between the ages of 18 and 31, the requirements were fixed by law and the conditions were the exact antithesis of those in the voluntary system. The object was to obtain the greatest number of men that could be obtained under the provisions of the Conscription Act. In the early stages of the draft there was very little difficulty in that connection and there were few rejects sent back from the camps. In the next quota there was even a smaller number of rejections on physical grounds than in the first quota. Then the army began to apply its experience in the fighting forces in the field. When the men were subjected to the stress and strain of the battle field it was found that certain physical conditions were much more detrimental to the building up of an efficient fighting force than they had been supposed to be by the medical authorities. So, as time went on, there was a tendency to make the physical standards more stringent. By this time we had also profited by our experience in mobilization, particularly in respect to that group of registrants known as the remediable defects group. We started to send men with remediable defects to the camps and to correct these defects and fit these men for service. The result was that the hospitals became clogged with men of this class when the hospital facilities were required for men who had sustained some physical disorder or disability after they had reached the camps. For instance, there were a great number of hernia cases sent to the camps at first and it was found that they developed into a much more serious condition when they were under excessive physical exercise, as carrying a heavy pack, taking long marches, etc. Hence, many operations became necessary and the men were put in the hospitals and were a decided economic loss to the Government, and at the same time encumbered space in the hospitals. It was found that these men were incapable of performing military duty and the army came to the conclusion that it was not desirable to have men sent to camp that would become a burden when they got there.

One modification of the standard against which I contended most strongly was an increase in the minimum height from 60 to 63 inches. The minimum height in the regular army was 64 inches. It was found that this was too much to be compatible with securing the greatest number of men capable of performing military duty. The requirement of the regular army, 64 inches, was decreased to 60 inches and then increased to 63 inches. It was found then that we had certain racial groups that included few men 63 inches tall and yet contained many men who were perfectly capable of performing military duty. Our argument was based on the standard of height in the Japanese army. The Japanese, though not coming up to the 63 inch standard, were perfectly capable of carrying a musket and pack and of taking long marches and fulfilling all military duties. The standard was put back to 60 inches and if that had not been done there would have been a much smaller percentage of fighting men than was actually contributed by this country.

To Dr. Pedersen's pleas for greater recognition for the medical branch of the service I am inclined to give unqualified approval in every respect, but I would not let the medical department be supreme. It should, however, have ample opportunity to present the conditions under which physical well-being should be preserved. It must be remembered, nevertheless, that doctors have notions (I trust I shall not make any ban of the part of the medical profession for saying it), and if given a free hand it might be just as it was with the 63 inch height requirement, which was under serious consideration by the Surgeon-General's office. It might be possible that we would have a predominance of medical opinion that would not conform to the best standards for the maintenance of an efficient army.

In the Civil War the doctors did not have as good opportunities as they had in this war and in the Civil War they had much better opportunities than they had had prior to that time. A greater chance than ever before has been given the doctors and the advantage of this has been shown in the results. It is recorded that the Duke of Wellington lost 711 men out of every one thousand by disease. I cannot give the exact statistics for the Civil War but I am inclined to believe that many more died of disease than of wounds. In the Russian-Japanese War it is said that no more men died of disease than died of wounds and our men, for the recent war, show that a considerably smaller percentage died by disease than by wounds. I read today some correspondence between General Grant and General Sherman in respect to the assignment of draft men to old regiments. Grant thought that the best method was to use old soldiers, because from the sanitary standpoint the old soldier was inured to the bad sanitary conditions, but the desirability of recruiting a medical service never entered his mind.

The conditions in respect to the draft in the Civil War must

have been very bad. I read with surprise some figures in Dr. Pedersen's paper comparing the number of rejections under the selective service system with the rejections under the first Civil War draft. I will give you the figures which I regard as startling, but I want to make a preliminary explanation. The Civil War Conscription Act went into effect on March 3, 1863. At that time the Civil War had been in progress for two years. Up to March 3, 1863, the method of securing soldiers was by the process of voluntary enlistment. It may be expected, therefore, that those men with patriotic zeal to serve had gone into the army, so those remaining at home were either not desirous of entering military service, either because of a lack of patriotism or for other reasons, which they considered legitimate, or were physically incapable of military service. There was a standard for the Civil War but you could put all the regulations under the Conscription Act in the palm of your hand. They were of the most fragmentary and general character and there was no such thing as the 475 which was the last pamphlet issued for the guidance of local and advisory medical boards. The standards were only in the most general terms. About the only conditions referred to as unfitting a man for military service were scrofula and secondary syphilis, and men were only rejected when they were incapable of performing manual labor. So the standard was very low. Bear in mind also in connection with the application of these statistics that there was not a first examination by a local board and then a later one in the camps to determine subsequently whether or not the man was disqualified. The Civil War draft was on an entirely different theory. There was only one examination and if the man passed he was held and if he did not he was rejected. In the Civil War there were four drafts. The first one was in 1863 and caused the draft riots, when they hung negroes if they showed themselves in the streets, and one hardly dared show the national emblem and even the Governor of New York was opposed to the Conscription Act. The New York *World* and the Chicago *Times* wrote editorials in opposition to it that were disseminated through the Southern States as propaganda. The other drafts of 1863 and 1864 were to supply the deficiences of the first draft quota. In the first draft quota there were 292,440 men and of these 39,000 did not respond. Of the 253,000 who responded, 83,500 were exempt for reasons other than physical unfitness. That left 169,524, and of this number 52,287 paid computation. Under the Civil War Conscription Act if a man did not want to serve all he had to do was to pay a sum of money which was supposed to be sufficient to finance another man who did go. This, however, was not the same thing as sending a substitute, as was also done during the Civil War. That left 117,000 of the 292,000 called to take a physical examination, and who did not buy their way out by commutation or who were not exempted for other reasons. Of this 117,237 men 81,387 were rejected for physical disability, leaving 35,850 who were eventually found to be physically fit out of 117,237 men, which is not 29 or 30 per cent., but is 70 per cent. physically unfit in the first draft of 1863. I think the physical condition of our men must have greatly improved since that time, even taking into account that the Civil War at this time had already drawn on the manhood of the country to furnish its fighting force. The first call of the Civil War was for 300,000 volunteers and that number was greatly oversubscribed. When it comes to the draft of 1863 we are looking at a cross-section of physical conditions that apparently does not give a very pleasing impression. Our rejections in the recent war of 29.6 per cent. disqualified looks small in comparison with the 70 per cent. at that time. At the camps 8.1 per cent. were rejected and this by contrast with Civil War conditions is certainly a very remarkable showing. If you take into consideration also that the standards for the Civil War draft were not higher than I have indicated in referring to the physical requirements and what was regarded as disqualifying, you can see that the comparison is all in favor of the selective service system of 1917.

I cannot say too much for the efficient service of the doctors in connection with the administration of the selective service law. I saw the doctors on the local boards working along with the other men and assisting them in the classification of the registrants, often at a great sacrifice to themselves, particularly in this community and for this reason: It was required under the provisions of the law that there should be three men on the board who should be residents of the district in which they were functioning. Now a lawyer residing in a community may have very little business in that community. He has his office down town and what he does in that community makes very little difference as regards his source of livelihood. A merchant is also drawn from that same community, but he does not necessarily run a local store. His business is not necessarily in that community, and the expression of his opinion on a local draft board was not going to affect his business. On the other hand take the doctor. Many of the registrants he brought into the world and he had administered to many of their families. He was known to more people than any other person in the community, and the expression of his opinion if not in harmony with the desires of the registrant might seriously injure his business, yet I have never known a doctor to deviate one hair's breath from what he conscientiously believed was right in respect to the classification of any registrant who appeared before him. He was a spendthrift of his time much to the detriment of his own business, and the foremost men, if not secured by the local boards, were secured by the advisory boards, and in the district boards there were splendid representatives of the medical profession. Many of the local boards had men doing their work who were magnificently qualified to do the work of a medical advisory board. At the camps there was sometimes manifested a different attitude from that which actuated the doctor at the local board. As I did not put on a uniform I can speak in a disinterested way. It sometimes happens that a man loses some good things when he puts on a uniform; and it sometimes happened that a doctor in a camp became a law unto himself. He thought regulations applied to lieutenants and subordinates but they did not apply to him and the physical standards were those he recognized. So it happened that men were rejected for such things as temperament, a way of saying that the doctor did not like the man because he was a Jew. Men were sent back to the local boards who were certainly fitted for military service. We sometimes found good and sufficient reasons why these conditions existed.

I recall an instance toward the end of the draft. After considerable opposition we succeeded in having it brought about so that a uniformed man could be inducted into a local board. Men who were found disqualified for general military service were inducted for special service, as for clerical work. We sent down to camp a great number of men from this city who were physically disqualified for general service, but who were capable of performing special service. One quota of men sent down were classified as Class A men. When we scanned the records and saw that these men all had physical defects we did not see how they could be classified as fit for military service; some were scarcely fit for special or limited service. I went down to Camp Upton and discovered that instead of grouping men according to Form 75, which was the standard for general service under which men were grouped A. B. C. or D, they were grouped under a standard for men having physical defects. They had been examined according to a standard to be used for the examination of men for the Developmental Battalion. The method of grouping was the same, by letters, but it expressed entirely different things. It took one-half a day of persistent argument to get these men examined according to the regulations for the induction of new recruits into the army. Finally this was done and all the men were returned. If we had accepted the standard that was expressed in the same terms but had a different meaning from that used at the local boards we would have lost all these men sent in for the purpose of rendering special service to the local boards of this city. There were frequent misunderstandings of which this is but one instance.

I am in favor of the retention of the doctor in the local board and of the retention of the medical advisory system, and I wish there was some way to eliminate the third physical examination at the camp, so that the authority of the army itself would be concomitant with the authority of the local and medical advisory boards at the place from which the man is sent. There is a great waste in examining the men. A man is examined in his own locality and he may be passed by the local board and advisory board and sent to a distant place and then may be rejected for a physical defect that should have been discovered at the first examination. There should be some way of conducting the examinations which would result in the induction of the recruit immediately into the service at the place where he is first examined.

Captain Asch:—In connection with what has been said I would like to emphasize a little more the importance of the physician at the local board. I had the privilege of being connected with the local boards on the East Side and it was impressed upon me that so far as the public was concerned, the doctor was the most important man on the local board; in fact you can hardly conceive from what you saw and heard that there was anybody on the board except the doctor. Perhaps that was because the first thing that happened to a man when he was registered was that he received a physical examination. He had the physical examination before he was classified so that the whole question of whether he was discharged or held seemed to rest with the doctor. If the men came to the board and talked with anybody in authority they addressed him as

"Doctor." Then the doctor at the local board had not only to examine the registrant, but if he claimed discharge on the ground that he had to support a family of aged parents, it might be that the whole family came up for discussion by the doctor. To the registrant and to his family the physician was more than anyone else on the board and he was practically the only one on the board. Later on I began to realize the difficulties of the situation and that one of the most difficult questions was that of the medical examination, and while I concur with the reader of the paper that the doctor should be given a freer hand I would like to suggest that he cannot be given a freer hand until the time comes when several doctors can come a little closer to an agreement than they have been doing.

As an instance of the way the doctors disagreed, we had one registrant who said he had hives and a doctor said he had hives, another doctor said he had something else (I shall not attempt to say the word, it was a medical term too much for me) and might die any minute. So it went with the final result that only one medical board had arbitrary power and that was the only method that relieved the situation.

THE NATIONAL HYSTERIA.

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When conditions are again normal in our beloved country, and we have ceased to suffer from the effects of the well-organized propaganda of one sort or another to which we have been subjected, there should be a psychiatric summing up in which the group psychosis and neuropathy observed in such large measure in the course of the present political régime would be properly appraised, and their causes and effects viewed according to the scientific method. At the present writing we are in the full flood of post-bellum hysteria, and our psychiatrists find it uncomfortable to study and comment upon patients who are cavorting around in a manner involving personal danger to diagnosticians, much as the study of the individual mental patient may sometimes menace the conscientious alienist.

Then, sad to say, there are the psychiatrists who are themselves not altogether free from the prevailing phychoses. They, however, will all recover, and when in their right mind will probably make the most valuable contributions to this subject. Some of these gentlemen are now telling us naively that there is no hysteria.

It would seem as though every act of the inept and mediocre men who control public affairs has contributed in a maddening manner to the orgy of fear which has swept the country, and also to the success of the revolutionary programme. If ten times the number of anarchists had been at work they could not have struck harder blows against our glorious American institutions than have the boomerang throwers who grace our public offices, our forums and our press. They have made far more radicals than an efficient and financially unlimited red propaganda could have done.

Can anyone tell us why we never get into a panic about the political charlatans and demagogues who from time to time are lovingly entrusted with our destinies?

Why is it that we never get nervous about the very things that make directly for anarchy, such as the recent suggestion of a great metropolitan daily that in certain circumstances the American people should constitute themselves into national lynching parties. What circumstances could be conceived of making such a thing possible except a complete breakdown of our system of law and order and the collapse of the Government itself? Our acute national psychoses, in other words, seem to be founded on something like the old religious bigotry. Political and economic heresies have simply taken the place of the old offences for which men were hunted, crucified and burned. Only the regnant faith can do no wrong. Even the proscription of political minorities by force is practised by men claiming to be Americans without arousing alarm. But let a heretic exercise his civil liberties and the country is made to quake in terror.

The enforcement of silence in the Russia of the Czars never produced anything but underground plotting; and this law holds good everywhere. In sane Britain only overt acts are proscribed.

The necessity of the Catholics to hold mass in secret in the old province of New York was undoubtedly a factor in the phenomenal growth of the faith of our fathers in this country in the early days.

The Quakers were persecuted in New England because they threatened not so much the state as the very throne of God. The radicals of today, it will be seen, are far less dangerous to the community.

As for the early Christians, as their numbers continued to increase, measures were taken to stamp them out as dangerous to the state. Sometimes for years together persecutions would be carried on with the avowed purpose of weeding out the new faith. During such times the Christians would practically disappear, hold meetings in secret, and pass much of the time in the labyrinth of catacombs which tunneled the city and which had for long been used as burial places for the wealthy. Sometimes the Christians would come forward in such vast numbers that those carrying on the persecutions would be out-wearied and the matter would drop again. It was not until A. D. 313 that the Milan Decree granted toleration. In the end, Christianity became the state religion (A. D. 392).

The persecution of the Separatists, who became the Pilgrim Fathers, was based upon the theory that they were a menace of the worst possible sort.

Fear will do us no good today, and those who promote it are guilty of constructive treason. They are unwittingly doing more to destroy the Government than all the reds put together. It is unworthy of a great republic to yield to panic and throw all its titanic energies into suppression instead of determinedly abolishing inequities.

This is all assuming that the national hysteria is not a planned thing, actually designed to disrupt our institutions in the interests of a master class cloaked in the habiliments of the founders and by no manner of means representative of the whole people.

In any consideration of this subject it must be borne in mind that much of the sensitiveness of the masses to inflammatory suggestion on the part of reactionaries is due to the regrettable fact of group feeble-mindedness, which exists upon a vaster scale than is ordinarily realized. In the light of this fact deliberate incitement of the less intelligent among the population takes on the character of a crime.

Our form of government, properly administered, is ideally adapted to the political needs of the American people; nothing ever has or ever will jeopardize it so much as the national hysteria now so sedulously cultivated by plotters, by knaves and by fools who are not reds.

Whom the gods would destroy they first make mad. Let us hope and pray that our very acute psychoses will not end in dementia.

115 Johnson Street.

GUN-SHOT WOUNDS OF THE CHEST.

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At the beginning of the war, the expectant principle of treating chest wounds was followed for small through and through punctured wounds produced by rifle or machine-gun bullets. This did very well, but a more active plan was essential for the so-called "stove in chest" with retained foreign bodies, wounds, for the most part, produced by high explosive shell fragments. Active treatment of chest wounds was started by the English and French surgeons in 1916, following the battle of the Somme, and consisted in the excision of the wound, complete cleansing of the pleural cavity, removal of the foreign body, when possible, and, in some cases, primary suture. From the similarity of lung and pleura wounds to other wounds of war, it will readily be seen that the same surgical treatment should apply.

In a series of 1603 gunshot wounds admitted to Base Hospital 61, and classified according to the anatomical region involved, our records show that wounds of the thorax (139) constituted 8.6%. Of these 118 involved the chest wall. Twenty-one were intrathoracic wounds. There were no wounds of the heart seen. Penetrating wounds of the lung and pleura (21) composed 17% of our gun-shot wounds of the chest.

The cases that reached this hospital had already received treatment, and the work at the base consisted principally in having all chest cases x-rayed and watching carefully for complications. As soon as a case came into the hospital, cultures were taken from the surface of the wound and from the wound cavity. The subsequent treatment depends upon the clinical and laboratory reports. The x-rays taken at the front did not always coincide with those obtained at the base. Fluid from the pleural cavity was subjected to microscopic and bacteriologic examination. At times the only guide to infection was the temperature and pulse.

There was a certain number of cases showing severe injuries to the chest wall, and this type required careful x-ray examination to determine the presence of foreign bodies.

In these cases in which there had been penetration of the lung substance with retention of the foreign body, an interesting series of cases developed. These cases bring up the question of what final disposition is made of the retained foreign body in the lung. The general opinion seems to be that a retained foreign body wherever situated will sooner or later give rise to trouble. It is possible for a foreign body in the lung to become incapsulated, it may be nucleus for infection or it may eventually project itself into the pleural cavity. There are cases reported in which the foreign body was coughed up with a spontaneous cure. Early removal is the best plan whenever possible. If not removed early and an empyema develops, it can not then be removed with safety, unless easily accessable, until a later period. A case illustrating this is shown in a German prisoner of war received at this hospital on Oct. 15, 1918. He was wounded Oct. 9th at 8 A. M. and was dressed after his capture two hours later on the field. He was removed in an ambulance but the car was wrecked by shell fire and the patient crawled into a dugout. He received no attention for three days, and was without food for this time. He was admitted to this hospital on the 15th, and as we had no x-ray equipment at this time no picture was taken. The operation consisted in the removal of the broken ribs and bone fragments with the evacuation of large quantities of pus from the pleura. Rubber tube drainage was inserted. Cultures of the fluid showed staphylococcus, Gram positive and Gram negative cocci. Later an x-ray of his chest was obtained (Fig. 1, No. 469), which showed a foreign body 2½ by 1 cm. Following the operation the patient continued to improve with a gain in weight. The empyema ran the usual course and he was later discharged from the hospital. No attemps were made to remove the foreign body. The above case shows the extraordinary resistence the lung has to a foreign body.

Another instance of retained foreign body in the lung was seen in the case of Sgt. C. W. of the 326th Inf., age 22, who received multiple gun-shot wounds of the right forearm, thigh and top of shoulder. The latter penetrated the chest.

He was wounded Oct. 14, 1918, in the Argonne at 8 P. M. At 8.30 he jumped on a moving ambulance and was taken to Field Hospital No. 328. He remained two hours and was taken to Evacuation Hospital No. 11. On Oct. 15 an operation was performed on arm and thigh under local anesthesia. A foreign body was removed from the thigh. X-ray demonstrated a foreign body in chest. The patient coughed up blood.

He was admitted to Base Hospital No. 61 Oct. 16, 1918. The x-ray showed a foreign body which moved with respiration in upper right chest (Fig. 2, No. 706). The foreign body had entered the chest through the wound on the top of the right shoulder between the outer end of the right clavicle and the spine of the scapula. He showed the physical signs of a thickened pleura, from the 5th space to the base anteriorly and the angle of the scapula to the base posteriorly.

This patient also had a partial paralysis of the ulnar and radial nerves, but showed improvement. The wounds healed.

Upon discharge, physical examination of the chest was negative. Total expansion was 2½ inches, right side 1 inch and left side 1½ inch. Heart action at rest was 86, after exercise 120. Absence of complications in this case are noteworthy.

There are two definite groups of symptoms of which these cases complain, those having a physical basis and those in which the symptoms are largely nervous. In that class showing nervous symptoms, the presence of the foreign body appears at time to cause a certain amount of mental anxiety. The question of operation in these cases for the removal of a foreign body is a difficult one to settle. We must remember that these cases have recovered from a severe injury, and that such a thoracic operation cannot be lightly considered. In certain selected cases in which the symptoms are very pronounced, and localization shows that the foreign body is easily accessible, a secondary operation is justifiable.

There is a group of hemothorax cases for the most part through and through wounds which entered the hospital. These cases were carefully sceened and rayed and if infected were drained. The following

will illustrate a case in which aspiration sufficed to effect a cure.

M. B., Pvt., Co. R, 165th Inf., received a through and through bullet wound of the right chest. He was wounded in the Argonne on Oct. 13th, 1918. He was in the field for an hour and crawled behind a bank at the roadside. He remained there for several hours and then walked three kilometers until picked up by an ambulance. He was driven about six kilometers to a field hospital where he received an injection of A. T. S. Several hours later he was removed to Evacuation Hospital No. 16, where he arrived at 2.00 A. M. Oct. 14. Here he was flouroscoped and no fluid or foreign body demonstrated. En route to the Evacuation Hospital he coughed up blood. On Oct. 16th he arrived at Base Hospital No. 61, and examination upon arrival revealed a healed wound of entrance to the mid-clavicular line 1½ inches above and somewhat internal to the nipple. A wound of exit was found 2½ inches to the outer side and below the angle of the right scapula. Vocal fremitus was deceased posteriorly on the right side, and there was dullness over the same area. Breath and voice sounds decreased below the angle of the scapula behind. Total expansion was 1½ inch, right ½ inch and left 1 inch. An x-ray picture (Fig. 3, No. 232) indicates fluid to the level of the third rib in the axillary line. On aspiration, 900 cc. of bloody fluid was obtained. Culture of this fluid showed Gram positive diplococci. Another picture (Fig. 4), taken Nov. 29th (Plate No. 502), still showed a small amount of fluid at the base of the right chest. A later plate (709) is shown in Fig. 5. On Nov. 3d and 4th the temperature reached 101.4. At all other times it had been normal. This soldier was later returned to the States.

As is to be expected, pneumonia and empyema are frequent occurrences. The latter may be the usual post-pneumonic type, or the mode of origin may be directly traced to the infection by the foreign body. It must not be forgotten that an otherwise uninfected hemothorax may be converted into an empyema, either from a dirty aspirating needle, or if this punctures the lung in an infected area the chest fluid may become infected upon the withdrawal of the needle. Pathogenesis in these cases may be impossible to determine. This is true of the following case:

Pvt. Co. D, 167th Inf., age 24.

Diagnosis: Perforating wound of the right chest. Fracture of the superior angle of the scapula, fracture of the 4th, 5th, 6th, 7th, 8th and 9th ribs. He was wounded on Oct. 14, 1918, and passed through Evacuation Hospital No. 11 two days later. The wound of the entrance was in the right shoulder. He suffered from shock and hemoptysis. The right chest was aspirated and a pint and a half of bloody fluid removed . Three days later a quart more was withdrawn. On Oct. 22d he was admitted to Base Hospital No. 61. On admission he complained of dyspnea and thoracic pain. His temperature was 103. An explorature puncture was at once made and no fluid was obtained. Examination of the chest showed definite signs of broncho-pneumonia. On Oct. 24th an x-ray showed the right chest markedly opaque. A machine-gun bullet was located in the left side of the chest, on the level with the first lumbar vertebra and a small foreign body in the right chest is shown in Fig. 6 (Plate No. 321). The following day 20 c.c. of sanguinous pus was removed. The aspirations were continued daily until Nov. 1st, when a portion of the ninth rib was excised under local anesthesia and drainage secured with two rubber tubes. A week later special Carrell tubes were placed in the wounds and the right chest was irrigated with Dakin's solution. Smears taken showed Gram-negative diplococci, staphylococci and streptococci. Under this treatment his general condition improved with a falling temperature. The patient did not take the irrigations well and they were subsequently discontinued. This was probably due to a communication with a branchus as he coughed considerably, which was thought to be due to the chlorine vapor. On Dec. 9th an x-ray plate showed the foreign bodies as in plate No. 321, and an abscess cavity on the right side surrounded the small foreign body (Plate No .624). During this time the patient was in such poor condition that it was doubtful whether he would recover. Physical examination showed the machine-gun bullet under the skin on the left side, between the 11th and 12th ribs, about 5½ inches from the spine. The patient ran the usual course of an empyema, the machine-gun bullet was removed, the operative wound closed and the patient subsequently evacuated to the United States.

Small localized empyema are very likely to be overlooked. Repeated x-ray and physical examinations are necessary to detect them. Sinuses are sometimes misleading as they are not always connected with a demonstratable foreign body, being at times due to imperfect obliteration of a cavity.

A case of mixed infection bilateral broncho-pneumonia following a penetrating gun-shot wound of the right chest with subsequent empyema was seen in the case of Pvt. V, Co. G, 166th Inf., age 23. He was wounded Oct. 14th, 1918, and admitted to Evacuation Hospital No. 10 two and a half hours later. On flouroscopic examination a foreign body (character not mentioned) was located between the ribs. The chest cavity was not entered. Debridement and removal of the foreign body ¼ cm. long (probably shell fragment) was done. He was admitted to Base Hospital No. 61 Oct. 16, 1918. There was a wound on the right chest between the 7th and 8th ribs anterior to the anterior auxillary line. A lateral broncho-pneumonia developed. The sputum showed type 2 pneumococcus. The heart was pushed to the left. Definite signs of fluid. On Nov. 2 1800 c.c. cloudy fluid was withdrawn from the right chest. This, upon examination, showed Gram positive streptococcus and diplococcus.

On Nov. 4th 300 c.c. of fluid was again aspirated from the right chest. Nov. 16th excision of one inch of the 8th rib in right posterior axillary line was made, and the chest drained. The temperature was subsequently within normal limits. Upon discharge expansion of the right lung was good. Percussion note was somewhat impaired in the lower chest. His chest is shown in Fig. 7, Plate 725. This patient was sent to the United States.

Pneumothorax of varying degrees is seen as such, but more frequently associated with hemo or pyothorax. A marked degree of subcutaneous empyema may result as was noted in the following soldier: Sgt. W. M. S., 61st Inf., Machine Gun Co., who was admitted to our hospital Nov. 14th. He had a penetrating wound of the chest produced by a machine gun bullet. This patient was wounded Nov. 6th and passed through Field Hospital No. 25 and Mobile Hospital No. 1. There a machine gun bul-

let was located in the muscles of the back and removed. Debridement of the anterior and posterior wounds, with primary closure of both pleura and skin, was done. The day following, he developed an extensive subcutaneous empyema from head to lower abdomen. On Nov. 14th, the date of admission to this hospital, he showed, upon examination, two sutured wounds in the chest. One was on the right side below the clavicle and the other at the lower angle of the scapula posteriorly. The sutures were removed and a large amount of pus removed from the posterior wound and a smaller amount from the anterior. There was a subcutaneous emphysema of chest and abdomen. The scrotum was distended with air to the size of a foetal head. Radiographic findings (Fig. 8, No. 495) showed a fracture of the second rib with evidence of thickened pleura. The patient's condition gradually improved so that on the second of December he had only a slight cough and the wounds were healing with slight discharge. On Dec. 8th his sputum was tinged with blood and he complained of pains in the upper right chest. Physical examination showed an area of cavernous breathing in the right mammary region near the sternum, but three days later this had disappeared, leaving a few rales at the bases. At no time did the temperature rise above 100.8°. The average temperature was about 99.4° on Dec. 16th; the breathing and expansion of the right chest was good with slight increased sounds over the lower chest. The patient was transferred to the United States a few days later, perfectly well.

In the series of penetrating gun-shot wounds of the lung and pleura there were five deaths. The mortality was about 23%. The autopsy protocols in these cases are seen below:

Autopsy Records

Case 1. Private P. P., No. 2981368, Co. M., 7th Inf., age 23.

Wounded Oct. 11, 1918. Multiple gun-shot wounds. Extensive pneumothorax of the right chest with emphysema of the subcutaneous tissues. Disappearance of liver dullness. Apex beat two fingers to left of nipple line. Aspiration of pleural cavity showed a large quantity of foul smelling yellow fluid and defribinated blood. Autopsy. Death.

The wound of entrance was about two inches below the clavicle, slightly outside the nipple line, between the 1st and 2d ribs. The bullet had fractured the 2d rib, passed through the upper and middle lobe of the lung, passed downwards and backwards, leaving the thorax in the mid-avillary line. It fractured the 8th and 9th ribs and, passing through the skin between the 10th and 11th ribs, it reëntered the buttock slightly posterior to the anterior superior spine of the ilium. Empyema of the right thorax. Traumatic diaphragmatic hernia containing 6 to 8 in. of the proximal end of the transverse colon. Pericarditis by extension. Slight laceration of the liver. Collapse of the right lung.

Post-mortem examination showed an undernourished individual. On opening the abdomen the hepatic angle of the colon could not be located and was later shown to have become herniated through the diaphragm. The pleural cavity contained about 200 cc. of yellow-green, putrid pus. The right lung was collapsed and on section contained no air. It was covered with a thick, greenish-gray exudate. The bullet had traversed the anterior part of the upper lobe. The posterior surface of the right lower lobe had been slightly lacerated by spicules of bone from the rib. About 8 in. of colon were found in the right thorax, protruding through a rent in the diaphragm.

Upon opening the pericardium there was a slight increase in the amount of fluid and a fibrinous deposit on the mesial side of the parietal pericardium. This had extended from the pleura. The stomach and intestines were normally placed with the exception of the hepatic flexure of the colon, as noted above. There apparently had been no obstruction of the bowels.

The upper part of the right lobe of the liver had been slightly injurfed by the passage of the bullet through the diaphragm. The gall bladder, the genito-urinary system, pancreas, thyroid, adrenals and brain were normal.

Case 2. Pvt. J. V. H., No. 1757896, Co. D, 312th Inf. Age 25.

Wounded Oct. 18, 1918, when he received a gun-shot wound which penetrated the left lung. He entered Base Hospital No. 61 Oct. 19. The wound of entrance was above the spine of the scapula posteriorly, and the wound of exit in the second interspace in the mid-clavicular line. Rales were heard over the left lobe, posteriorly. Pneumothorax. Dullness over the right lower lobe. Fluid in the right pleural cavity. Symptoms of meningitis. Death. Autopsy.

Anatomical diagnosis: Acute purulent meningitis due to Gram negative diplococcus. Fracture of the 1st and 2d ribs, penetrating bullet wound of the right chest. Sub-scapular abscess connected with a localized empyema at the apex of the right pleural cavity. Hemothorax. Atelectasis of the right lower lobe. Sub-acute parenchymatous, nephritis. Chronic endocarditis of the mitral valve, with stenosis, acute cholecystitis.

The right lung was very firmly adherent at the apex. The pleural cavity contained about 250 cc. of bloody fluid and a large fibrinous clot. The inferior lobe was firmly adherent to the base. There was a large, bulging mass at the apex, about the size of a man's fist. The lung was firmly adherent to this. This mass was opened and was found to be filled with pus. The left lung was free and no fluid was present. The bronchi were intensely congested and contained some pus. On section, the right upper lobe of the lung contained many consolidated lobules. This appeared to originate by extension from above. The right lower lobe was very small and collapsed and contained no air. The left lung contained air throughout. The mediastinum contained large, swollen lymph glands and showed considerable edema.

Circulatory system: The valves were free and soft except the mitral, which showed a distinct vegetation, causing stenosis. There were yellow, elevated nodules on the aorta around the openings of the intercostal vessels.

On section, the kidney capsules stripped with considerable difficulty. The surface was torn. They cut less easily than normal, apparently due to an increase in connective tissue. There was a considerable plastic exudate around the gall bladder. It was adherent to the duodenum. The pancreas, the adrenals, the liver, thyroid and the bones and the gastro-intestinal system were normal.

Upon examination of the brain there was a slight exudate along the course of all the vessels, especially

in the Sylvian fissure and on the inferior portion of the cerebellum.

The course of the bullet was traced from the superspinous fossa on the right side of the posterior chest, passing through the chest wall and fracturing the 1st and 2d ribs, further through the mediastinum, and passed out through the 1st and 2d ribs on the left side. There was a marked infection along the course of this tract. The large pus pocket at the apex of the right lung was connected with another large pus pocket front of the right scapula. Infection had extended to the periosteum of the spinal column and apparently affected the central nervous system by direct extension.

Bacteriology: Cultures from the heart blood showed no growth. From the abscess at the apex of the lung streptococcus and pneumococcus. Smears from the brain showed a Gram negative diplococcus.

Case 3. Pvt. E. B. C., Co. I, 308th Inf. Age 24.

Lacerated gun-shot wound of the right chest. Empyema. Collapse of the right lung. Infarcation of the spleen. Death. Autopsy.

Admitted to Base Hospital No. 61 Oct. 7, 1918. Wound of the right chest penetrating at the 5th interspace in the anterior axillary line.

This extended from the nipple to the costal margin. A counter opening was seen at the 8th interspace in the posterior axillary line.

Much mucus in the left bronchus. The right lung had collapsed completely and was firmly adherent to the diaphragm and mediastinum. This was firm and contained no air and was beefy red in appearance. The pleural covities were covered with a thick, yellow, fibrinous exudate. There was a large communication with the exterior, admitting two fingers easily through the 4th and 5th interspaces. The 5th rib had been broken and partly removed. The bullet left the chest about the 8th interspace. The circulatory system, gastro-intestinal system, genito-urinary system, liver, thyroid, adrenals and brain were normal. The spleen was one and one-half times its normal size. The capsule was not thickened and on section was very soft and congested.

Case 4. Pvt. D. C. J., Co. C, 324th M. G. Battalion. Age 25.

Wounded Nov. 10, 1918. Bullet penetrated the soft parts of the left upper arm, entered the left chest below the axilla. Admitted to Base Hospital No. 61 Nov. 14. Wounds dressed and drainage tubes inserted. His general condition was poor. Temperature 104°. Dullness of the left lobe. Aspiration in the 6th interspace and much foul-smelling gas removed. Wound culture showed an anerole. Nov. 24th patient delirious in extremis. Died the following day.

Anatomic diagnosis: Empyema. Collapse of the left lung. Broncho-pneumonia. Fracture of the left 4th rib. Gun-shot wounds multiple, penetrating left chest. Retained foreign body.

There was a penetrating wound on the external surface of the left arm, which passed posteriorly to the humerus. There was a ragged, superficial wound on the lateral surface of the left thigh just below the gluteal fold. There was a penetrating wound of the thorax in the left mid-axillary line at the level of the 4th rib.

The left pleural cavity contained about 600 cc. of frothy, foul-smelling pus. The lung had collapsed and was firmly adherent to the mediastinum and diaphragm. The lower end of the trachea and bronchi were very congested and contained considerable sero-sanguinous material. The left lung was covered with a thick black exudate. The lateral surface, half way between the base and the apex, was lacerated. The terminal bronchioles were much dilated. The middle lobe was the same as the upper and there was some dark, depressed alveolar outlines. Many were consolidated along the inferior and posterior surfaces. These areas were dark red, stood out distinctly from the surrounding air-containing tissue, and sank rapidly in water.

Circulatory system, gastro-intestinal system, and genite-urinary system, normal.

The liver was about one and one-half times its normal size, enlargement chiefly confined to the left lobe. The surface was very mottled, with yellow edges, and on section this presented a distinct nutmeg appearance. Other organs normal.

Bacteriology: Heart's blood showed a non-homolytic streptococcus. From the lung was obtained a Gram negative, motile, putrefactive bacillus (undetermined), staphlococcus and streptococcus.

Case 5. Corpl. A. W., No. 735837, Co. F, 11th Inf. Age 22.

Wounded Nov. 5, 1918, at 6 A. M. Diagnosis: Gun-shot wound of the left lower chest and upper abdomen. At operation 8 hours later, the upper abdomen was found filled with blood. The pleural cavity was cleansed and the lacerated spleen removed. No evidence of injury to the intestines. Closure of the abdominal wound with rubber tube drains. Intravenous saline. Patient in poor condition. Nov. 12 a large amount of sloughing tissue was removed.

Nov. 14 he was admitted to Base Hospital No. 61. The sutures had pulled out and the entire wound was open for a distance of 8 inches. Cultures from the wound showed streptococcus and an anerole. Nov. 19 the wound was partially drawn together with heavy through and through silk sutures. Nov. 24 signs of a right broncho pneumonia.

Gun-shot wound of the chest in the mid-scapular line, fracturing the 11th rib. Wound of the abdomen in the left hypochondriac and lumbar region. Collapse of the left lung. Empyema left, acute fibrinous pleurisy, localized peritinitis, hemolytic streptococcemia.

Post-mortem examination showed an emaciated individual. A large suppurating wound on the anterior abdominal wall. There was a large wound perforating the thorax, through the space occupied by the 11th rib.

The intestines were adherent to the anterior parietal peritineum. Locallized peritonitis limited to the intestines sub-adjacent to the wound. Adhesions were easily broken up. The spleen had been previously removed. There were many adhesions in this region.

The left lung had collapsed. There was no pus in the pleural cavity, but a thick, fibrinous exudate on the visceral and parietal pleura. The right lung was very voluminous and the posterior part of the lower lobe was slightly reddened and showed subpleural hemorrhages. On section the upper and lower lobes were air containing throughout. The lower lobe appeared reddish on the surface and on section sero-pus escaped. The left lung was about one-third its normal size. The parietal pleura was removed with the diaphragm. It was very thick and tough, like shoe leather, as was the visceral pleura.

Both surfaces were covered with much fibrinous exudate. The pleural cavity had evidently been the seat of a marked suppurative process, which had drained out completely through the opening in the thorax. The lower and posterior parts of the lobe were consolidated. The inferior surface was firmly adherent to the diaphragm. The genito-urinary system, pancreas, adrenals, were normal. The thyroid was much enlarged and gave the appearance of colloid degeneration. Some loops of the ilium were adherent to the colon and the abdominal wall. There was no ulceration or obstruction. The cecum and transverse colon were evidently involved by direct extension from the wound. On section, the liver showed some evidence of cloudy swelling.

The surface of the brain was much congested and there was a brown spot 5 cm. long and 2 cm. wide on the inferior surface of the frontal lobe, involving the extreme anterior portion. This appears to be the seat of an old hemorrhage.

Bacteriology: Heart's blood showed hemolytic streptococcus. Abdominal wound staphlococcus, Gram positive and Gram negative diplococcus. From the lung, hemolytic streptococcus and staphlococcus.

Lead in the Casserole.

A paper by Helen Masters, B.Sc., which appears in the May number of *The Analyst*, sounds a warning note in regard to the use of the glazed casserole in culinary operations. Vessels of fireproofed pottery-ware have been extensively employed for cooking purposes during recent years, and are usually regarded as being more hygienic than metallic vessels. This might easily be a fallacy, judging from some of the results obtained by Miss Masters. It is, of course, well known that pottery glazes frequently contain lead, but the possibility of food cooked in such vessels becoming contaminated with lead appears to have been overlooked. We were under the impression that the glaze of the casserole was a lead-free porcelain glaze, and that if lead were used it was in the form of "fritt" tested to show that the lead in it was proof against the solvent action of weak acids. Miss Masters proves from experiments made with several types of casserole that in some cases a considerable amount of lead can be extracted from the glaze, not only by the action of 4 per cent. acetic acid, but also by the action of more dilute solutions of organic acids, notably 1 per cent. acetic acid, citric or malic acid, such as might occur in ordinary cooking processes. The lead extracted on boiling with 1 per cent. citric acid for 30 minutes amounted in several cases to from 2 to 4 mg. of lead monoxide per square dm. of the glaze. Moreover, the glaze continues to yield more lead even after 10 or 12 treatments, although in the last treatment the amount of lead extracted is less than in the first. These results were obtained with vessels made of pottery ware glazed only on the inside and stated to be of French make. It is observed that vessels of a similar kind, but of English make, are now being sold, and those so far examined yield considerably less lead than the French casseroles—viz., about 0.2 mg. per square dm. of the glaze. Casseroles made of "fireproof china," with a glazed surface both inside and out, did not yield lead under the same conditions of experiment. Vessels made of glazed earthenware, as, for example, pie-dishes, and pudding-basins in some cases, gave up a trace of lead. These findings, it seems to us, need careful consideration. Most authorities agree that lead-contaminated waters can only be regarded as reasonably safe if they contain less than 1/100 gr. per gallon (1 in 7 millions), so that a casserole yielding in cooking, through acid juices and vinegar, lead to the amounts above stated may give rise to serious disturbances of health.—(*Lancet.*)

Yellow Fever.

In this disease the most profound degenerative changes with fatty deposition are produced with great rapidity in the liver cells, and in addition there is a marked increase in the destruction of red blood cells. Definite jaundice commences as early as the second day. In severe cases the quiescent stage is followed by increased depth of jaundice and the gravest symptoms—viz., black vomit, hemorrhages from the gums or other mucous membranes, petechiæ of the skin, albuminuria, delirium, subsultus tendinum, possibly convulsions, Cheyne-Stokes breathing, coma, and death.—(*Lancet.*)

WHAT AN ORDINARY MAN OR WOMAN IS, OR OUGHT TO BE, ON REACHING MIDDLE AGE.

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Let us consider what manner of human being this is who nears the half-century mark. Perils of youth have been survived; many inherent weaknesses are then overcome, also, defects due to accident or error either limited or compensated. Many individuals present no abnormal phenomena, to themselves nor to casual examination by experts. Resources of science have now become large enough to discover with fair certainty where any one stands in the scheme of survival processes. It is the part of wisdom to have such appraisements made with some regularity. Surprises are thus fore-fended and catastrophies prevented.

After a thorough exploration has been made and repeated once in so often, of the status of the heart, blood vessels, kidneys, a clean bill of health may be delivered. Thereupon a safe point of departure is secured for the next phase of advance. If the bill of health is not wholly clean (and only rarely can it be) at least there are thus brought into view defective or impaired states. One knows then where one stands; what form and kind of special precautions are indicated; what limitations must be accepted. It is a well attested truth that by knowing one's limitations, and by acting on the hints supplied, the individual can then take counsel and adjust himself to most exigencies of life and win enhanced efficiency.

Civilization has done much to amplify human capabilities, to bring inherent powers to the foreground of availability, up to at least the age of forty. Experience would seem to have demonstrated that, in our present stage of evolution, the age of forty is the boundary-line of unlimited energizing, of generous burden-bearing, of permissible prodigalities of effort. The wise one will then begin to slow down, to disburden him or herself of the superfluous, or non-imperative stresses. Few can bring themselves to give heed to counsel till the shadows lengthen, or till some defect or weakness is forced upon attention.

Whosoever desires the continuance of youthful capabilities, for duty, for pleasure, or renown, can possess them till late age. Experience demonstrates that many insidious, disabling and destructive or retrograde tissue-changes, can be indefinitely postponed.

Changes occurring in aging structures are those of normal evolution; one phase of being merges into another, till a time comes when destructive processes advance so much more rapidly than the constructive, even of the stabilizing forces, that the end must ultimately come.

It is entirely possible to so conserve the whole man that a nicety of balance shall be preserved; the more distressing phases limited; the mind remaining unimpaired longest; the vegetative processes next; disabilities in the motor and static domain advancing so deliberately that the organism slows down symmetrically into terminal phases permitting a subsidence of vital processes insensibly and free from distress. The findings of science are steadily pointing this way.

The alterations inevitably occurring as age creeps on are those changes which take place in the character of the cells. Structures vary in their rate of cell-changes, in their differentiation and their degeneration; also they vary in degrees characteristic for each group of cells (tissue).

Hence in an adult nearly all cell-changes and stages may co-exist. That is, in some they are slower, there being more stability, more capability of regeneration than in others. The tissues in which changes are slower, hence in which greater power for stabilization and regeneration reside, are those of the great organs of vegetative life, such as the liver. The muscles may be said to stand next, in stability those of the nervous system are least able to resist deterioration.

A man of fifty is, or should be, at the zenith of his powers. He is a product of self-construction and automatic adjustment. Inherited potentialities count for much; compulsion of circumstance is by far the larger factor in advance or retrogression; then fluctuations through behavior, feeling, emotion, impulsiveness decide what the final reckoning shall show.

Today a citizen at the mid-century mark is by no means so old as those of the same chronology were during the middle or dark ages of history. This applies chiefly to those who enjoy, and make good use of, the advantages of civilization.

Age is reckoned by scientists on a basis of (1) chronology, in terms of years and days; of (2) physiology shown by degrees or qualities of development, of structural and functional integration, and of (3) phychology marked by gradations in mental proficiency based on tests of advance or retardation, attributes original or acquired. We speak of a "child in years" or one of "premature intelligence" and the phrase is one full of significance and force.

Advances in knowledge of how to conserve human efficiency, while noticeable in times long gone, are now vastly more pronounced, varied, and happily more manageable. Later we will inquire into a few of the less obvious and more important agencies for betterment.

Fatalists, of whom there are still many (in some persons the tendency is well concealed) maintain the belief that one reaches one's appointed end according to schedule. They are seldom aware of special privileges, or fortuitous chances, whereby they are permitted to move serenely along the even tenor of their lives without other bumps than from accident or ill-luck. The habit of taking self-counsel as to what reasons make for, or against, the continuance of a peaceful advance is rare; is often condemned and accounted a culpability.

Peace is not always with honor; a little with contentment is by no means always gain. Those influences, that are not for use, are, however, particularly liable to be against us. The price of liberty is, and always was, eternal vigilance; so also of psychophysical possessions. The greatest acquirable asset is a wise taste for preparedness.

It is an accepted truism that to let well enough alone will settle advantageously almost any problem of no apparent urgency or unusualness. From such materials are fatalists, drones and sluggards made. Faith is the confident acceptance of things unseen, if not understood; "God is in Heaven, all's well in the world." And a fine sentiment it is, one vastly comforting to assume, substantially that wheels of progress, of routine advance of wholesome momentum, need no guiding. Yet to rest upon this "laissez faire" assumption, attributing to it an expression of Divine wisdom, leads directly counter to the spirit of a number of other golden rules of conduct which unhesitatingly advocate prevision and forehandedness. How shall each one decide? When in doubt throw out scouts; at least survey the ground and take a trial balance of circumstances, of assets and of liabilities.

To better one's personal efficiency is within the powers of every man. Latent energies persist till near life's end; they can be at any time made more available and to consummate all real needs.

Some, but only the sane, promptings should be followed, avoiding habit paths vitiated by preferential beliefs or over sophistication. Few agencies for harm transcend suggestions from fools, or rattle-brained acquaintances or the misinterpretations of language. Incurable diseases, in some stages, do reduce forces to a minimum. Even when they exist, however, all is not lost unless despair, not fate, conquers.

Serene confidence, courageous efforts at amelioration, will suffice to carry one over manifold obstacles popularly regarded as insuperable.

The impossible so frequently becomes realized of late that it is safe to assume that almost any one can be reconstructed at almost any age, till a steady deterioration compels resignation. No good whatever, only peril, comes from disregarding unlovely actualities such as forces capable of destructive action.

PART II.

What the Mature Man or Woman Should Keep Watch for as Evidence of Things Going Wrong in His Internal Machinery. Vigilant Personal Hygiene.

Danger signals should be promptly recognized and catastrophies provided against. How to recognize perils; how to pursue a wise course for the prevention of extensive or rapid loss of vigor; how to avoid the harm of over-doing or under-doing or wrong-doing, it is one's obligation to learn.

The man of mature years may congratulate himself on having attained a state of relative stability, yet he must never lose sight of certain new susceptibilities liable to appear as his stores of vitality become less exuberant, as his resisting powers run low, as weak spots multiply. He should always be serenely ready, cheerfully on the job lest he grow sleepy at his post, or apathetic or lose his vigor and come to grief or harm.

We will here group together, and briefly mention, a few sources of dangers which are not so inexorable as the true phenomena of decline. Only too frequently do these perils arise; they begin insidiously, in one or other locality or guise and may suddenly loom large in the guise of cripplings or death warrants. Most of them are avoidable or can be checked in their incipiency.

In no realm of human endeavor are rewards of foresight so large; for promptly recognizing the earlier beginnings of trouble. Eternal vigilance is nowhere else more clearly the price of peace, of comfort and of defense against premature decreptitude.

To make sure of safety the watchman must exercise the same conscientiousness as does a sentry on duty during war; there must be no drowsing while

*For a masterly, scientific presentation of the subject see "The Problem of Age, Growth and Death," by Chas. Sedgwick Minot (Putnam Co.)

on post. The enterprise need entail no painful stress nor apprehension, merely an alert interestedness. It is similar to any other enterprise, or sporting proposition. He matches his wits, his strength, his skill against unseen and relentless adversaries both by day and by night, in season and out.

While he who can afford it may and should employ special experts, call upon them promptly and freely whenever occasion warrants, he must be at all times his own self supervisor, commander and guide. In order to discharge this agreeable duty and to his own satisfaction, he must, like any good sportsman, good soldier, sailor, engineer, farmer or artist, familiarize himself with the essential points and rules of the game he elects to play.

We are not now recounting or reviewing the earlier steps or marks of aging structures—that is done elsewhere. Here we present a few of the changing states, feelings, capabilities for reaction as related to the invasions of hurtful agencies. Determination is the product of nature, especially of emotion, the feelings and the preferences.

These states may be noticeable or only to be discovered by expert examiners. Among the first danger states, or morbid conditions to be reckoned with, are shackling habits which have become so fixed, so static or so urgent as to carry natural behavior too far in any direction they push. Habits or automatisms may serve to simplify and economize effort, or they may impair changeability, fluidity, check variety in action, holding one down as though anchored against the influence of other and more wholesome forces.

Thus that degree of variability becomes lost or impaired upon which alone progress can advance. Middle life is the period of over stability or inertia. Vide: a top spinning so steadily as to seem still, "goes to sleep." Cultivate variability, elasticity, mobility, capabilities for change, for taking another point of view, for approaching problems from new angles. Also don't lose momentum or steering gears won't work.

At the meridian we sit upon the fence all too willingly, we deliberate too long, by reason of starting too late, or by over cautiousness. Then again some have formed habits of over doing, of prodigality in energizing, of squandering effort. We may yield at times to the driving force of pure restlessness or of over-stressed attention, or of worry and will then be all the better for freedom of action. Indeed safety lies that way and no other.

Self suppression when too sternly exercised is capable of serioues harm, even of disaster. To form the habit of impassivity has been extolled in song and story, but bears its own penalties. Frantic over-doing may be a morbid evidence of former commendable energies, or of approaching mental disorder; it is always a sign of irritability and demands attention and modification.

Too often the man of fifty, having achieved material successes, looks about for other worlds to conquer. He often elects to squander his waning energies on fruitless ambitions, on place hunting, social political, or he seeks to become an officer in diverse and sundry organizations, tends to load himself up with unwarranted or burdensome duties, thus deliberately causing leaks in his fountains of force.

Bad as are the effects of over-doing, perhaps those due to under-doing are more serious and far reaching. Rusting out is proverbially regarded as worse than being worked out. Self-neglect is the peril most to be shunned by the middle-aged. Stagnation opens the door to a host of so-called metabolic disorders concerned in that baffling complex group of ailments which follow errors in the biochemistry of foodstuffs. Of these, goutiness, diabetes and arteriosclerosis are familiar examples.

There are also to be considered the composite disorders of mind and body (psychosomatopathies), wherein morbid mental or psychical phenomena are the conspicuous, or at least are the more important, factors. Here we have among the disuse ailments, neglect of one's endowments, gifts, natural capacities and proficiencies.

The besetting error of the day seems to be a baseless unrest, doubt, dissatisfaction, and with ludicrous and yet pathetic bewilderments, wabblings, due to not knowing what to believe yet prating loudly of what one assumes to know or on the other hand, bemoaning futile inferences from partial knowledge or crass ignorance of facts. Much of this prevalent confusion is due to the inertia, rusting out of middle-aged minds which were of small calibre or cultivation to begin with, often of impaired integrity, and yet their possessors insist upon dominating collective thought and action. The causes arise in misuse of other forces making for poise, balance, equilibrium, in distraction of attention, in subversion of good efforts, and lead to pettinesses, uselessnesses, to overlooking present blessings while longing for the unattainable, while incapable of learning or defining what one wants. All these are mainly disuse ailments.

Here lies the opportunity (Kairos) of the hyperoptimistic, the religious and metaphysical opportunists, or of the sincere new thoughter, of any who teach mental poise, equanimity. Why not teach yourself all this—be your own guide to salvation or efficiency? There were myriads of good books before Mother Eddy pre-empted the field and recast in quaint forms the teachings of the Bible via Quimby and the sound old poets and philosophers.

Disorders due to over-motion are readily repaired by rest, or change, or substitution. Those due to emotion (being moved) run the entire gamut of anomalous human behavior. Love (or charity or service) is the master impulse, or some other equally sound impulse of emotion will do. Modern philosophers accredit love (libido) with such trenchant power that the Freudian School will explain the whole of psychopathic phenomena on a basis of libidinous tortuosities, both as to diagnosis and cure.

On this emotional or effective level also lies jealousy, envy, hatred, malice, uncharitableness, revenge, remorse, and the like disturbers of sanity, whose prodigal energizings or whose retroactions go far toward subverting physiologic balance. Temper is impulse to violently explode verging on the abnormal. Temper should act as an inherent quality supplying energy, hence steerage way which, when judiciously controlled and applied, provides a useful instrumentality.

A well controlled temper is a powerful impulse for good or for evil. During the prevalence of disorders of the heart and blood vessels, especially during middle age, provocation to anger is proverbially perilous, leading to apoplexy, decreptitude, paralysis or death. The capacity to check dominant impulses, restraint is the crux on which safety or catastrophe depends.

A large group of individuals otherwise normal are the "feebly inhibited" ill provided with inertia, restraint, balance, hence of poise. Davenport expresses the opinion that a tendency to outbursts of temper in adults is inherited as a dominant trait and tends to reappear in half the children of the affected parent. It is apt to be associated with various forms of morbidity in nervous organizations. The only excuse to be accepted for violence of temper is that the individual comes of morbid stock, for which he or she is to be pitied, but not excused. It can be radically cured, but it's not an easy job.

Temptations, allurements, enticements, overyearnings readily hurry the mature adult into situations of peril. Especially is this a danger for: (1) those feebly inhibited, and (2) those deliberately self-indulgent—those whose habits of control have not been adequately formed—many don't want them formed.

Temptations include problems of sex impulse, appetite, craving for possession of what may not be one's own; for ambitions in questionable directions, for over-doing, under-doing, for evil doing. All of which involve strains on the integrity of those protective mechanisms summed up in the phrase "survival values."

Nervous stresses and strains are credited with the largest variety of agencies for upsetting physiologic as well as psychologic balance. Since growing knowledge of the ductless glands has contributed so much to the elucidation of most problems, we have need to look for them for the key. Here lie the origin of fear, worry, uncertainties, surprise and supply adequate causes for all "nervousness" and most giving way of health. Fear, in its varied aspects, correlates, worry, anxiety, distress, is capable of acting as the starting point of almost any or all disease (see Boris Sides—"Cause of Psychopathic Maladies," 1916).

Perils of the Heart, Bloodvessels, Kidneys.

This cardio-vascular-renal group is now found to supply the sources of decreptitude and death far beyond what could have been believed a score or two of years ago, and is seizing attention on all sides—among the laity and profession alike. Among these disorders are: Heart muscle impairments, and a large group due to disorders of body chemistry shown in anomalies of blood pressure and of the kidneys.

Perils from Derangements in the Digestive Organs.

Disturbances in primary digestive processes are small, negligable matters compared to perils in the structures of the accessory organs and correlated parts—especially from the secondary and ultimate elaborate processes involved in bio-chemical processes, metabolism. Then there are the whole congeries of invading bacteria and the effects of the vicious ones.

Disorders of primary digestion are capable of regulation by exercising judgment in choice of foods, periods and intervals of feeding, in methods of eating, adequate mastication, insalivation, depending more on normal hunger and avoiding errors due to fictitious cravings.

Far deeper perils lie in chronic disorders of associated organic structures, e. g., chronic appendicitis, gall stone disease, pancreatitis, gastric and duodenal ulcer and also many of the complications of splanchno or enteroptosia; also kinks, angulations, veils, stasis and the like.

Digestive ailments may be blamed on three chief factors: (a) anxiety, (b) over-eating, and (c) under exercising.

Among the disease ailments, the "Human Factor," a life insurance journal, calls attention to "shortening the span of life" in the American people at the "Transition Period" by tables showing the increased death rate from disuse of our locomotor apparatus through increased cheap transportation facilities and "getting too large around the waist."

Increase of wealth results in a large proportion of our people who live in semi-idleness, encouraging indulgences in unhealthful habits of sloth, soft living, over feeding, under exercising and other forms of intemperance.

Even among the laboring class work is done by watching or feeding machinery at the cost of normal physical exertion. Farmers ride on plows over the same fields their forefathers followed the furrow on foot. Adaptation will come in time, but meanwhile many must suffer and die who need not. "Common humanity demands that we bring to bear our constantly increasing knowledge to prevent the excessive death toll of the transition period."

In the larger cities the general death rate during the past 50 years has increased as follows: Ages 45 to 54, 20.6%; 55 to 64, 28.1%; 68 and over, 11.2%. This merely accounts for death rate and is therefore not due to any relative increase in the number of lives saved in younger ages.

Among the perils which deserve passing show are:

Effects of Infections and Their Neglect.

Transmissible disorders should be avoided at all costs. We exist and prevail solely because mankind is pathetically or criminally neglectful of enforcing and demanding of the government plain precautions. Hence influenza, catarrhs, affecting nose, throat, ears and their disastrous bearing on general and special health, continue to prevail in all communities and are accepted as part of fate; whereas it is because the average intelligence is still too low for mankind to run their own affairs.

Exposure, to preventible forms and of degrees of excessive heat or excessive cold; to direct sunrays without adequate protection; this also usually involves excessive fatigue. Curious mental reactions continue to prevail unchallenged and act as determinants of absurd and uneconomic conduct.

PART III.

What the Middle Aged Man or Woman Should Be Able to Do With Mental and Physical Machinery,

which should work without giving evidence of what is going on.

A man or woman at the apex of maturity should be able to do whatever he or she intelligently wishes and resolves to do. In order to be assured of this privilege and capability, healthy determination should be formed and preparatory measures taken from earliest consciousness of purpose.

Of course, when the high tide of powers has come and gone (passed) evidence will have arisen, definite enough of a falling off in capacity for activities, for initiative and for sustained endurance. The majority of existing impairments have resulted from abandoning those habits of healthy, energetic doings and buoy-

ant enjoyments which so well deserved to be maintained.

It is a matter of common experience that those who cultivate or encourage the hopefulness, the alert interests, the taking part in youthful doings are best able to retain youthful qualities. Should this course not have been pursued much can now be accomplished by a confident determination to win back those capabilities which have subsided, and will yet achieve a very respectable place in a world where well directed effort always brings its reward.

There need be no age limit placed upon the normal well poised man or woman, whose mind and impulses remain young. Most limitations imposed by passing years are brought about by doubts, by accumulated adverse suggestions, by discouraging thoughts or notions, by following faulty examples and erroneous habits and customs.

If you are willing to accept a miserable and inefficient old age, by all means give up working. If you really wish to retain and continue to enjoy the insignia and capacities of your early development or adolescent prime, be sure to change the character of your work and methods of performance for better ones, and in full accord with normal mutations occurring during natural developmental epochs. Modify your ambitions and the amount of sustained effort in each day or week or month, but never give up striving to do your best till forced to yield, to renounce by disablements or overmastering senescence. Not once but a hundred times I have heard Weir Mitchell reply to some rumor he was about to give up practice. "Deny it utterly. You shall see me die in harness."

To accept current statements that men or women of late maturity or even of well advanced years are unable to add to world progress and welfare "is to fly in the face of the biographical dictionary." Much of the best achievements in art, in science, in literature, as well as in material advancement, are made by men and women who have passed maturity. Mere accumulation of years does not render one unfit for excellent accomplishment, rather it makes them more fit, more capable, in perhaps somewhat different directions and on different planes of facility. It also should, and does, fit one for higher kinds of enjoyment and for making contributions to world welfare, as is demonstrated on all sides.

The crowning privilege of a life well spent is to bring the fruits of toil to fruition; that of a life ill spent is to be overcome by the effects of youthful follies. A woman can accomplish quite as much as a man, within her sphere of capabilities, which differ in kind, rather than in degree.

Insofar as we refuse woman "a place in the sun," as we fail to encourage her by every means to perfect her capabilities, just so far de we create social and sexual limitations, disorders and social unrest. During the Homeric period the status of woman in Greece appears to have been at its highest, equal to that of man. Those who today choose to believe that women's place is only in the home should search history to learn what a rigid application of that principle resulted in.

We must abjure the tendency to regard woman as sexually defective in the home or out of the home. This error has come about largely through tradition and superstition on the one hand, and by unequal social conditions on the other. For one thing when a woman has ceased to menstruate she has achieved an emancipation from a certain life-long thraldom or handicap. She then becomes mentally more nearly on a parity with man; is distinctly better fitted to compete with him on an intellectual basis. As a comrade she now is capable of giving, as well as taking, and on an even plane.

The middle-aged toiler has acquired practiced facilities, often finished proficiencies, which more than offset, in many directions, youthful initiatives. He has attained greater precision, more certitude in his habit paths; has become more dependable, balanced, systematic, deliberate; is less readily led astray. He has grown more economic of effort, though more retricted in the direction and sweep of effort. This developed caution and elaborated exactitude acts as a safeguard against many blunders, to which the flood tide of adolescent energy renders one liable. He experiments less but accomplishes his chosen tasks with greater assurance and reliability. He now relies more on plan, scheme, specification, on labor and time-saving devices. Insofar he may have fallen out of the current of rapid progress, but he is now better able to see both sides of the road.

The mature man is quite as necessary to world progress in his domain as is the flambuoyant, aggressive youngster. One could not do without the other. The man, who "does his trick" at the wheel is just as important in navigation as the man who goes aloft to make sail. The mature man is more conscientious, is better able to appraise the risks. These attributes of eldership are, in the majority of instances, in professional, scientific and industrial exigencies, simply invaluable. They are of utmost value in a world or nation, like the United States, dominated by the restless energy and recklessness of overconfident youth.

The mature man no longer makes so many or so various observations, but he can the better assemble, arrange and evaluate his findings, define relationships, reach logical sequences and conclusions. All forms and avenues of advance are enhanced by the development of specially directed energies combined with the power of judicial acumen.

Devisers of careful measures, of plans for competitions, of scientific and individual struggles, create magnificent idealizations, symbols, slogans, imaginative appeals, transforming strife into lofty effort; exhibit self sacrifice and patriotism. The fires of initiative, of sustained endeavor are lit and kept aglow by youth.

By contrast the serenity of middle age seems to them tame, indeed. Peaceful pursuits, patient upbuilding, steady construction and reconstruction, arouses little or no enthusiasms, no thrills, only small ambitions. Personal and professional industrial betterments of what is established is regarded by youth with indifference or scorn.

Dramatic, even pyrotechnic dynamics were, and always will be, required in the crucial points of life. After the charging, the assaults, comes the holding of positions won, and above all the patient taking account of stock, the saving and utilizing of resources. "How much of modern militarism in that most industrious of nations now dying so recklessly for the 'War Lord' was due to the enthusiastic (yet gradual and protracted) body drills of Vater Jahn?" (Percy McKaye).

These valiant rushes toward the adversary are the products of the long patient subordination of impulse to repeated directions and guidance of the middle aged fathers of these fiery youths.

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Making Bricks Without Straw.

Set the scientifically trained practitioner of the prevailing type a definite problem in diagnosis having nothing to do with the patient's spiritual or intellectual life, and you will get a finely worked out answer.

All very well from a materialistic standpoint, and this type of worker is indispensable, of course, but it is just here, nevertheless, that the profession falls short and the freak cults come into their own, for beyond materialism very few of us get very far.

To say that those who reject our ministrations are half-educated and half-baked is not to cover the case at all. The fault lies chiefly with ourselves.

Even those physicians who cultivate things psychic attempt instinctively to materialize them, as it were, and work with formulæ recalling motor mechanics and Teutonic hypotheses.

We must not forget that even when a pretty problem in definite diagnosis has been solved that our therapy too often lags far behind our skill in determining what the matter is with the patient—meaning by therapy the whole management of the case.

Hence the common recourse to quacks.

The trouble is not that we lack divine powers but that we are not any too human.

Is it not true that the man who possesses great personal impressiveness—with patients—and is gifted in the way of swaying the sick psychically is very frequently regarded a bit askance, while incense is burned before the owls of the laboratory and clinic?

It seems to us that the gifts of all types of practitioners—if they really be gifts—ought to be conscripted, never tabooed or invidiously estimated.

Our diagnosis and therapy ought to take more account of human personality, in the practitioner as well as in the patient. Will papers ever be written on that theme, we wonder, as erudite and profitable as those that now preëmpt the columns of the medical press?

"The successful physician of the future," says Dr. Joseph Collins, "must make a biological study of human nature and of instinct if he would fulfill his privileges and discharge his duties. In no other way can he compete with the empiricists, supernaturalists and neoplatonists who have reaped such harvests in this country at the expense of the victims of incapacitating disorder of one or more of the bodily functions masquerading as disease of the nervous system." To which we would add that the "successful physician" of the future must apply the knowledge so gained—he must be something more than a mere student. In such a case he will not have to compete with "empiricists, supernaturalists and neoplatonists"—why should there be any such folk if the physician of the future lives up to his calling better than the practitioner of today?

No small part of the lamented Osler's success was due to his remarkable personality and understanding of faith as the great lever of life, to use his own phrase. It would do matter-of-fact physicians a lot of good to read what he wrote on this subject in "The Progress of the Century" (Harper, 1901).

The Dry Invasion of Scotland.

It appears that the World League Against Alcoholism, behind which is the Anti-Saloon League of America, is contemplating a drive in Europe, and that one of its first objectives will be Scotland.

We are bound to admit that the enterprise of the League is, in classic phrase, something fierce.

It is to be borne in mind that the use of booze in Scotland is rooted peculiarly deep. Any history of medicine will tell you about the Brunonian System, developed by one Brown, a Scotch physician who laid down principles regarding sthenic and asthenic diseases and their appropriate treatment. The former called for depressing measures, such as bleeding, while the latter required stimulation. Now Brown taught that alcohol was the stimulant par excellence, thus setting in motion the arch fallacy about the physiological action of alcohol. It is difficult to imagine a native Scot proving recreant to the time-honored tradition. There is a sentiment in the thing. It is not merely a matter of logic (in which the Scot knows no superiors) nor even of fact. Scientific men in Scotland no doubt are as well informed as, if not better informed than, their brethren in other parts of the world regarding the depressing effects of alcohol, but as for the man in the street one can hardly imagine conversion.

When the drys move on Scotland they assail the greatest stronghold of alcohol, a stronghold in which the old tenets regarding alcohol are held with the same tenacity as the religious faith of the country. It will be very interesting to see how they fare at the hands of descendants of the old Covenanters. Our sporting intuitions descry another Bannockburn, with the Scotch winning against the presumptuous invaders.

Whom the gods would destroy they first make mad.

Self-Betrayed Bawds.

Freud's discovery that man frequently attributes to others the fatal weakness that makes his own heart a hell helps us greatly to understand the clergyman who is a crank on the subject of feminine fashions. This type of clergyman will describe a visit to a bathing beach in language ostensibly intended to produce a moral effect but which in fact carries a rankly obscene implication. Very often his hearers are people who without this sort of suggestion would not see anything evil at a bathing beach at all, nor anywhere else. There can be no manner of doubt that objective sights are given much added significance and interest by the deliverances of lecherous pharisees and filthy-minded puritans, themselves preoccupied with all the lewdness of the world. Beauty an offense and happiness a sin is still the professed creed of these potential satyrs.

Those principles of Freud which are sound ought to be widely popularized, to the end that clerical and all other frauds will think twice before unmasking their leprous souls.

Faugh!

An incredible number of people wet the thumb with saliva from time to time in counting paper money. To watch them in the banks, getting their filthy money ready for deposit, is enough to spoil one's appetite for the next meal.

It has doubtless occurred to many that the bank people might do something to dissuade these pigs from their abominable habit, as by putting up signs modeled after the anti-spitting warnings of the Department of Health, but one realizes the probable futility of appealing to them when he reflects upon the sickening atmosphere in which a bank's staff usually works. Nothing in the slum quarter has anything on the average bank in point of noisome air; it is about as well ventilated as a Broadway movie house. Such benighted gentry are not, presumably, especially interested in hygiene.

Another criminal is the post office clerk who wets his thumb while handling the stamps you are purchasing. Here, again, there is no hope, for the authorities who maintain our grossly unhygienic post offices must be dead to ordinary niceties. The Federal health authorities would be taken more seriously if they saw to it that Government buildings were not breeding places of disease. How can other folk be expected to be hygienically and sanitarily decent with such vile examples set by the Government itself.

One cannot help noticing, in the movies, that the "aristocrat" always wets his thumb whenever he counts money.

Granville Barker is now in this country for the purpose of emphasizing the part played by the theatre in a democracy toward portraying and inculcating good manners.

We think that Barker might very well jack up the movies a bit, and make the aristocrats of the film set a good example for the masses, instead of behaving like filthy pigs.

Let's have some propaganda for manners and hygiene as well in the movies. This would largely atone for their bad art.

Experience Teaches.

Don't be too sure, says the wise editor of a well known journal devoted solely to tuberculosis, that prohibition will effect any reduction in the prevalence of pulmonary disease. Perhaps we shall yet have to alter the old dogma about alcoholism as a factor in the production of tuberculosis.

We also heard a well known clinician express his opinion the other day as to the amount of cirrhosis of the liver that we would see under prohibition. He suspected that we would see about as much as ever, since he was inclined to hold condiments responsible for cirrhosis perhaps equally with alcohol. Americans rarely eat a meal without much pepper, spicy sauces and ketchups, and it stands to reason that these things are not wholly without effect on the hepatic structures.

Perhaps somebody can tell us whether the Scotch are given to the use of condiments. The reason we suggest this is because cirrhosis of the liver is said to be relatively rare in Scotland, although the Scotch are not noted for abstemiousness.

Prohibition will teach us some things valuable from the scientific standpont, which will compensate to some extent for the liberties which have been lost to us through this measure and others of like political import.

Miscellany

CONDUCTED BY ARTHUR C. JACOBSON, M. D.

The Therapeutic Methods Employed by the Saviour.

Forty-one of the healing miracles performed by Jesus Christ upon individuals are described in the Gospels. Saint John describes five, Saint Mark eighteen, Saint Matthew twenty-five, and Saint Luke twenty-four, but allowing for repetitions the miracles total forty-one. The healing of multitudes is also alluded to by Saint John and Saint Matthew.

The ascendency of Jesus over the common people obviously depended chiefly upon the exercise of His healing powers.

As to Jesus' manner of healing, this is not always gone into. The usual method appears to have been the laying-on of hands in a way to suggest spiritual power. His system included touch, word, "telepathy" and suggestion.

Dæmons were ordered to come forth; paralytics were commanded to take up their beds and walk; Lazarus was ordered to come forth out of the cave in which his body had been laid.

The healing of Bartimæus, of Jairus' daughter, and of the mother of Peter's wife was effected by a combination of word and touch. Touch alone was sometimes employed (Malchus).

Ceremonial sometimes supplemented touch and word, as when saliva was applied. Tacitus, by the way, relates that the Emperor Vespasian healed a blind man by this means, so that the restoration of the blind man at Bethsaida furnishes an interesting parallel.

By merely touching Jesus some patients were cured; in fact, only His garments were touched by the woman with an "issue."

Regarding telepathy, expounders of the miracles have quoted Myers to show the sense in which they use the term: "the communication of impressions of any kind from one mind to another, independently of the recognized channels of sense," and they cite as examples the healing of the child of the Syrophenician woman and of the centurion's servant. Telepathy is alleged to depend upon telæsthesia, or spiritual perception ("spirit with spirit can meet").

Suggestion, of course, played a part no matter what means were employed.

Jesus did not scorn dramatic accessories, especially when the patient's faith was weak.

It is very evident that the Jewish people among whom Jesus labored were highly neurotic and that they were ripe for suggestion of the sort to which Jesus subjected them. This is only to say that then, as now, repressions led to neuroses and phychoses of grave but not organic character. Such affections may have been even more common than now, relatively speaking, because of the greater repressions entailed by the prevailing canons of life and thought in countries like Galilee and Judæa.

No violation of natural law need be assumed in the case of the miracles. Such assumptions of lawlessness on the part of God have been denounced by authorities like Bishop Lyttleton. Saint Augustine held that the miracles were not against nature.

The point is that Jesus "merely used a higher law to overrule a lower, and healed in accordance with the processes of nature, as do our scientific psychotherapeutists today." His ministrations released certain inhibitions.

The writer does not agree with the idea of some critics that Jesus cared as little about the nature of disease as Mrs. Eddy. Even Harnack has fallen into this error. In the case of the daughter of Jairus, supposed to be dead, He said: "Why make ye this ado, and weep? The damsel is not dead, but sleepeth." In other words, He recognized the true character of the case as one of hysterical trance, and we should say that He showed concern lest what He had done would not be properly understood, for "He charged them straitly that no man should know it" (Saint Mark, v, 43).

The raising of Lazarus from the dead should be read in the light of what preceded the miracle:

Now a certain man was sick, named Lazarus, of Bethany, the town of Mary and her sister Martha.

(It was that Mary which anointed the Lord with ointment, and wiped his feet with her hair, whose brother Lazarus was sick.)

Therefore his sisters sent unto him, saying, Lord, behold, he whom thou lovest is sick.

When Jesus heard that, he said, This sickness is not unto death, but for the glory of God, that the Son of God might be glorified thereby.

Apparently Lazarus did die, and laid in the cave four days, and even Jesus, speaking metaphorically, no doubt, said: "Lazarus is dead." Then followed the miracle.

We cannot get away from the phrase: "This sickness is not unto death." Jesus knew that the simple and intensely neurotic man of Bethany, who had doubtless seen Him perform His wonders, and who was much loved by Him, was in the trance state. Jesus' tears and groans, as He approached the cave, did not signify grief, but concern over the plight of his patient. The whole incident emphasizes Jesus' understanding of the nature of disease.

Not possessing the histories of the Saviour's patients we have a right to assume that His cases may have been neurotic in type.

Did He encounter none of too little faith? Were there any unrecorded failures? It is the writer's belief that Jesus employed only His human faculties in the differentiation of disease types, and in the cure of His selected cases, and that He must have encountered unalterable organic types. In this connection it is well to recall Bishop Lyttleton's remark: "To assume lawlessness on the part of God is to make Him inferior to our highest conceptions of human character."

A rational view of the miracles by no means excludes the acceptance of Jesus' divine character.

Jesus was the most successful of psychotherapeutists, but no miracle of olden times was essentially greater than that which we have all seen effected through the thyroid therapy of cretinism.

Society Proceedings

The Society of Medical Jurisprudence

The following are the proceedings of the 304th regular meeting, held at the New York Academy of Medicine, November 10, 1919.

Executive Session.

1. Reading of the minutes of the last meeting by the Secretary.
2. Reading of the proposed Amendment to the Constitution and By-Laws by the Secretary.
   "Amend Article IX, Section 2, of the Constitution and By-Laws by adding at the end thereof the following: 'Any member who has remained in good standing and has paid his dues continuously for twenty-five (25) years, may, on application to, and approval by the Board of Trustees, retain his membership in the Society without further payment of dues.'"
3. The following applicants, having been approved by the Board of Trustees and recommended to membership, were duly elected:
   James O'Malley, Esq., 165 Broadway, New York City.
   Frederick L. Hackenburg, Esq., 261 Broadway, New York City.
   Dr. Joseph H. Rosenberg, 73 West 116th Street, New York City.
   Hon. Cornelius Huth, 34 Nassau Street, New York City.
   Dr. M. Mortimer Sherman, Kings County Hospital, Brooklyn.
4. Nomination of officers and trustees for the year 1920:
   For President, Dr. Nathan B. VanEtten.
   For Vice-President, Charles Oakes, Esq.
   For Treasurer, Charles P. Blaney, Esq.
   For Corresponding Secretary, Dr. Ed. E. Hicks.
   For Recording Secretary, Dr. L. Howard Moss.
   For Trustees, Dr. Thomas C. Chalmers, Dr. George L. Brodhead, Dr. Flavius Packer, Dr. E. E. Smith, Dr. Edward D. Fisher, Oscar W. Ehrhorn, Esq., Alfred E. Ommen, Esq., John C. West, Esq., and George L. Genung, Esq.

Scientific Session.

1. Paper: "Sex Aberration—A Medico-Legal Study." By Dr. Bernard S. Talmey.

American Proctologic Society.

At the twentieth annual meeting, at Atlantic City, N. J., of this Society in 1919, these officers were elected:

President, Collier F. Martin, Philadelphia; Vice-President, J. Coles Brick, Philadelphia; Secretary-Treasurer, Ralph W. Jackson, Fall River, Mass. Executive Council: Jerome M. Lynch, New York; Collier F. Martin, Philadelphia; Dwight H. Murray, Syracuse, N. Y.; Ralph W. Jackson, Fall River, Mass. The next meeting will be held at Memphis, Tenn., April 22 and 23, 1920.

In the presidential address, Dr. Jerome M. Lynch said that it was two years since the society last met, and during this period there was little opportunity for original work in their special line. It is impossible to study the alimentary canal segmentally, since all its parts are so closely related and correlated that one is apt to misinterpret symptoms by confining his interest to one segment. There is no more important problem in connection with the subject of disease than the proper interpretation of symptoms; and it is of the first importance that one should know embryology, anatomy, physiology and the other fundamentals for such interpretation.

Since, embryologically, the alimentary canal is divided into a fore and a hind gut, and since the hind gut includes about thirty inches of the ileum, which is capable of taking on the function of the colon, it is self-evident that this whole segment should be included in their special work.

They must be, not only good proctologists, but trained abdominal surgeons as well.

Dr. E. H. Terrell, of Richmond, Va., stated that during the past seven months he had examined forty-four patients with pruritus ani. In thirty-nine of these small infected sinuses

were found at or just beneath the ano-rectal line, and from these a small probe, bent at an acute angle, was found to pass downward under the skin of the affected parts. A careful and painstaking inspection of every part of the anal canal is necessary in locating these sinuses, and Dr. Terrell has found the "Physiological Anal Speculum," devised by Dr. F. P. Nourse of Lewiston, Idaho, the best instrument for this purpose. In the severe cases of pruritus from three to four sinuses were found, but in the milder localized cases not infrequently only one sinus was found. It is the opinion of the author that the irritation from one sinus involves not more than one-fourth of the circumference of the anus.

The treatment consists in opening the sinuses from above downward, under local anesthesia, using a bent probe as a guide. Twenty-five cases have been operated on by Dr. Terrell, after this manner, with complete relief of the symptom when the parts had healed.

Dr. William M. Beach, of Pittsburgh, said that modern surgery includes in its demands for finesse, freedom from terror, pain, post-operative complications, speedy recovery and careful technic. Local anaesthesia enables one to meet these requirements and he finds apothesine superior to most of such anesthetics. He uses it in the spinal canal, for nerve trunk blocking, and for local infiltration. The solution is usually from ½ down to 1/10 and never over 1. It is equal in power to any other local anesthetic, but more slowly absorbed; and 2 to 10 minutes should be allowed after introduction before beginning the operation. He has used apothesine in 30 cases of ano-rectal surgery in the past two years with no untoward effects except in three cases. He has practically abandoned the use of morphin and scopolomin prior to operations, and the former is seldom required afterward.

Dr. Frank C. Yeomans, of New York City, said that theories advanced for the causation of the leading symptoms of coccygodynia, pain in the region of the coccyx, are: 1. Neuralgic, 2. Neuritic, 3. Injury and 4. Sympathetic. The first three are based on traumatism and comprise the major number of cases. The traumatism is within the pelvis as in labor or external as a fall. As a rule the periosteum of the coccyx only is injured and the soft parts adjacent to the bone. Injury of these structures initiates an inflammatory reaction with proliferation and later contraction of the new-formed fibrous tissue and compression of the nerves which traverse it, causing neuralgia or neuritis. Fracture or dislocation of the coccyx may cause pressure pain.

The characteristic pain is spasmodic and aching, aggravated by sitting or rising, but not affected by urination or defecation.

The diagnosis is made by a bidigital examination—the index finger in the rectum, the thumb making counter-pressure outside—thus palpating the coccyx and compressing the soft parts adjacent to it, to determine the portion of the coccygeal plexus of nerve involved.

There must be excluded diseases of the spine and of the nervous system, as tabes, and locally lesions of the anal canal and rectum simulating coccygodynin, as anal fissure, cryptitis, papillitis, blind internal fistulae, thrombosed hemorrhoidal veins, proctitis and foreign bodies in the rectum; also, in women, disease of the external and internal genitals and, in men, of the uro-genital organs.

The prognosis in general is good on the ground that the pain resides in the coccygeal plexus of nerves and not in the bone as was formerly supposed.

The treatment is an application of the principle of injecting sensory nerves with 80 per cent. alcohol, thereby causing their degeneration, as suggested by Schlosser in 1907, and practised with marked success in trifacial neuralgia.

The injections are made aseptically, without anesthesia, at the office. A sterile syringe is filled with 20 per cent. alcohol and armed with a 2-inch needle of fine gauge. The point of maximum tenderness is determined bidigitally, then, maintaining the index finger in the rectum as a guide, the needle is carried through the skin of the mid-line to the tender spot and 10 to 20 minims are injected slowly. The interval between injections is five to seven days.

The writer has had 28 cases in all of which he treated 24; and of these, 20 were females and 4 males.

External trauma was responsible for 15 cases; difficult labor, 3; 2 followed local operations and in 4 the cause could not be determined.

The duration of the pain before operation was from three weeks to fifteen years, averaging 22 months.

The number of injections varied from one to ten, average four.

Results of treatment: Clinically cured, 13; relieved, 7; failed, 1.

Elapsed time since treatment varies from three months to nine years.

The only case of failure was in an otherwise healthy, robust girl, aged 10 years. As no benefit followed ten injections, the writer excised the coccyx in October, 1915, with immediate relief of pain and no recurrence.

In discussing the increase prevalence of cercomon-intestinalis-hominis infections, Dr. John L. Jelks, of Memphis, Tenn., said he observed the frequent association of flagellate infection with that of amebic ulceration of the rectum and colon. During the last five years, he has observed the pure cercomona infections. It appears that each succeeding year, he sees more ceses and greater virulency and severity of symptoms; and some of the patients seen during the last two years, were most pitiable objects of human physical depravity.

In severe cases, there are from ten to thirty stools per day. These are not the amber colored, or the sanguine-muco-purulent and very offensive stools seen in amebic cases, but are like those seen in typhoid fever and in the acute diarrhea of pellagra. The pathology appears the same in character as that of pellagra. The rapid loss of weight, neurosis, anaemia and melancholia, while not constant, are in some cases profound and are conditions common to both cercomona infections and pellagra. Mania may even be suicidal.

As to the treatment, all carbo-hydrates are eliminated and the diet is restricted as nearly as possible to albumens, milk, meat juices, fowl and gluten bread. The intestinal tract, is emptied preferably with salts or castor oil, and then bismuth subnitrate is given, two to four drachms, every four to six hours, followed by phenomethyl-formate, ten to fifteen grains in salol-coated capsules, or hexamethylenamin, ten grains. This is contniued a week, then the bowel flushed out with salts or oil again and the treatment resumed; the theory being that liquifying the intestinal content will permit the bismuth to incorporate the infecting organisms, and that adding formaldehyde and methylene will supply a bismuth-methyl-formate, a powerful parisiticide.

It is impossible to rid one of this infection in a few days by any treatment.

Speaking on Dakin's solution and dichloramine-T in proctology, Dr. J. Coles Brick, of Philadelphia, said that Dakin's solution presents many difficulties in its manufacture, is unstable when made, tends to become caustic, and will not keep. Chloramine-T gives up its chlorine less rapidly, has greater antiseptic value and is less irritating. Dichloramine-T solutions are unstable, and, when prolonged germicidal action is required, it is preferably used in an oily solution, the preparation of which he described. Chlorcosane is preferred by some as a solvent. He quoted Dakin and Dunham "Chloramine-T and Dichloramine-T give materially better results than the hypochlorites when acting on organisms in a blood medium."

He reported the case of a patient, greatly debilitated by a persistent muco-purulent diarrhea from a hemorrhagic catarrhal proctitis, sigmoiditis and colitis, the etiology of which was not demonstrable. Treatment by colonic irrigations with antiseptic and astringent solutions, first by rectum and then by means of an appendicostomy, were of no avail till finally Dakin's solution was used up to 10 strength through the appendicostomy, with immediate improvement and final cure.

The writer was led then to use these agents through the sigmoidoscope as adjuvants in the treatment of cases of amebic dysentery, and concludes that they will prove valuable parasiticides in recto-colonic infections.

Multiple adenomata and esthiomene malignans was the topic of Collier F. Martin, of Philadelphia, who reported first a case of multiple adenomata. The patient, a woman, complained of considerable abdominal pain and constant desire for stool. Bowels had to be moved as soon as she had eaten, considerable blood and muccous being passed at the time. The entire lower bowel was found filled with adenomatous tissue, a portion of which protruded through the anus at the time of stool. Under ether anesthesia, as much of the growth as could be prolapsed through the anal canal, was ligated and removed. She had a rapid recurrence of her symptoms, and six weeks later had a left inguinal colostomy performed by Dr. Willam A. Steel. At the site of the operation the bowel appeared normal. About six weeks later, the colon began to evert and prolapsed through the abdominal wall; and the mucous membrane became studded with small adenomatous tumors. A colectomy was advised, but the patient did not consent. At the present time she has improved in general health, and has gained considerable weight, but the outlook is very poor.

He then reported a second case under the title of esthiomene malignans, referring to the clinical appearance and not to the pathology.

The patient, a man, presented himself for examination in April of this year. After driving an ammunition truck in France for several months, he was sent to the hospital be-

(*Concluded on page 22*)

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(*Concluded from page 52*)

cause of disability. While there he was treated for enterocolitis. Finally he was sent to the States and discharged from the service. The entire anal aperture was obliterated by a hard indurated mass of new tissue. The skin was greatly thickened and slightly reddened. The induration extended well over to the tuberosities of the ischia. It was almost impossible for him to have a stool except after great effort. He had a constant burning pain when sitting, so intolerable that he rarely assumed this position. The abdomen was somewhat extended and tympanitic. The appearance of the skin about the anus resembled those cases which have been classified as Esthiomene, due to syphilis and tuberculosis. A colostomy was performed, and a piece of tissue removed from the posterior margin of the anus. The entire pelvis was filled with a solid mass of new tissue, with many nodules scattered over the colon and in the mesentery. A report from the pathologist showed the tumor to be a myxo-sarcoma. The operation was performed on May 9, and since then the abdominal tumors have apparently increased in size and number. There is some swelling of the feet, and the patient is beginning to show irritation of the bladder. He has been receiving Coley's serum, but is rapidly growing worse.

Vaccine treatment for pruritus ani was discussed by possible of Syracuse, N. Y., who said that pruritus ani was always a reasons for failures with stock vaccine. Dr. Dwight H. Murray, disease most stubbornly resistant to all kinds of treatment, and that it was now nine years since he had established to his own satisfaction that the etiological cause was the streptococcus fecalis, and that since then he had found practically 100 per cent. of the cases were the result of this infection. His theory was at first met by the usual crop of unbelievers, but since this many have acknowledged its correctness.

He used autogenous vaccines with marked success in lessening the intensity and frequency of the itching and has cured most cases, and has used stock vaccines with less success. Complicating infections, such as staphylococcus aureus and bacillus coli, may require mixed vaccines for complete relief.

The extreme difficulty of having bacteriologic work done in most places make a stock vaccine most desirable. Four years ago one commercial house put out such a vaccine for experimental purposes, but the reports on its use did not show sufficient successes to warrant marketing the product. Yet some reports received by Dr. Murray from men who had experimented with this firm's vaccine, were distinctly favorable.

Dr. Murray's conclusion as to the comparative value of autogenous vaccines are as follows:

1. Stock streptococcus fecalis vaccine is not quite as efficacious as autogenous vaccine.
2. Failure to get relief is possibly the fault of the operator, or because of a complicating infection, and should have further bacteriological investigation.
3. Large doses are innocucus so far as by-effects are concerned.
4. It is a mistake to fill the mind of the patient with doubt as to the efficacy of the treatment or the ability of the physician in charge even though he has had little or no experience.
5. Correction by operation of local pathology present with pruritus ani will not relieve the itching, when an infection of the skin is present.
6. The presence of local pathology with pruritus ani is coincident.
7. Stock vaccine should be made and supplied to the profession with the understanding that relief is not promised in any sense, but is expected.
8. Investigation and failure are good things and beget our earnest and careful efforts to find the truth.
9. Neither an investigator nor his work can be considered the last word, and for this reason we should all work together without bias to the end that the best results of treatment may be found for these unfortunate sufferers.

Age in Cerebro-Spinal Fever.

Age has a distinct influence on prognosis which is bad at the two extremes of life. In infants under 12 months of age the mortality is high, mainly because the patients usually come under observation late from the difficulty in arriving at an early diagnosis, for Robb and others have found that with early treatment infants do very well; the delay in cases that survive may lead to the formation of meningitic adhesions and hydrocephalus (posterior basic meningitis). Between the ages of 2 and 10 the outlook becomes very favorable, but after 40 the mortality curve rises, and in old people, in whom the disease is very rare, it may reach 100 per cent. One of the factors militating against recovery in patients over 40 is the existence of arterio-sclerotic renal disease.—(*Lancet.*)

THE FLU.

When your back is broke and your eyes are blurred,
And your shin bones knock and your tongue is furred,
And your tonsils squeak and your hair gets dry,
And you're doggone sure that you're going to die,
But you're skeered you won't and afraid you will,
Just drag to bed and have your chill,
And pray the Lord to see you through,
For you've got the flu, boy,
You've got the flu.

When your toes curl up and your belt goes flat,
And you're twice as mean as a Thomas cat,
And life is a long and dismal curse,
And your food all tastes like a hard boiled hearse;
When your lattice aches and your head's a buzz,
And nothing is as it ever was,
Here are my sad regrets to you—
You've got the flu, boy,
You've got the flu.

What is it like, this Spanish flu?
Ask me, brother, for I've been through.
It is by Misery out of Despair;
It pulls your teeth and curls your hair;
It thins your blood and brays your bones,
And fills your craw with moans and groans,
And sometimes, maybe, you get well.
Some call it flu—I call it hell!

J. P. McEvoy.

A Land Without Windows.

Roumania is a land of strange contrasts. In the streets of Bucharest great white oxen with sweeping horns dragging rude peasant carts are utterly indifferent to the honking of passing automobiles—French and Italian machines, and the well-known flivver of the United States. In the wheat fields water buffalo plod along in front of an old plow, while in the field adjoining an enterprising farmer is trying out a new American tractor brought in by the American Red Cross.

The utilization of every available kind of motive power and farm machinery is an indication of the acute need in Roumania. The transportation tie-up caused by the plundering of her scanty railroad equipment by the invading armies of the Central Powers is still hampering the country's recovery from the war.

Door hinges and window glass are among the things most urgently requested of the Allies by the Roumanians for the reconstruction of the districts which were pillaged by the enemy. It is estimated by newspaper statisticians that twenty square miles of window glass were smashed by the invading armies during their successive campaigns. Scarcely a hinge or a door knob was left intact when the enemy passed. Everything that could be utilized for munitions was taken away and what remained was smashed or rendered unserviceable.

This systematic campaign of spoliation and destruction brought demands for a nondescript miscellany of supplies when the American Red Cross and other relief agencies came to the assistance of the Roumanian peasants and villagers returning to find their property stripped of everything useful. Food and clothing, of course, were most sorely needed at first, but now farming implements, glass, house fittings and a wide variety of other supplies are being brought in for the work of rebuilding.

What Home Service Has Done.

A report from 58 per cent of the home service sections of the American Red Cross shows that 386,673 families of soldiers and sailors are being assisted by this organization. The service is in touch with more than 500,000 families. Grants and loans of money amounting to $566,063.75 were made during a recent month, and money relief to dependents of soldiers and sailors during the past fourteen months has totalled $6,836,760. This fund is taken from Red Cross chapter treasuries, which are maintained by membership dues and war funds.

During the war the home service cases at one time ran as high as 700,000. Thirty thousand workers, 28,000 of whom were volunteers, were engaged in this work. Of the 3,700 chapters rendering home service 2,900 were in communities with a population of less than 8,000. Now that the war is over it has been decided that chapters may undertake work with other families where the field is not covered already by other social agencies. The Red Cross will not seek to perpetuate home service as an integral part of its organization, but will leave each chapter free to establish it independently for the Red Cross any time it seems advisable to do so.